US Army Corps
of Engineers®
Walla Walla District

United States
Environmental Protection Agency
Region 10

DREDGED MATERIAL MANAGEMENT PLAN AND ENVIRONMENTAL IMPACT STATEMENT

McNary Reservoir and Lower Snake River Reservoirs

APPENDIX B
Cost Estimates

FINAL
July 2002

REPORT DOCUMENTATION PAGE

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13. ABSTRACT *(Maximum 200 words)*

This final Dredged Material Management Plan/Environmental Impact Statement (DMMP/EIS) presents the Corps of Engineers' programmatic plan for maintenance of the authorized navigation channel and certain publicly owned facilities in the lower Snake River reservoirs between Lewiston, Idaho and the Columbia River, and McNary reservoir on the Columbia River for 20 years; for management of dredged material from these reservoirs; and for maintenance of flow conveyance capacity at the most upstream extent of the Lower Granite reservoir for the remaining economic life of the dam and reservoir project (to year 2074). The Corps, along with the U.S. Environmental Protection Agency, analyzed four alternatives for this Final DMMP/EIS: Alternative 1 - No Action (No Change) - Maintenance Dredging With In-Water Disposal; Alternative 2 - Maintenance Dredging With In-Water Disposal to Create Fish Habitat and a 3-Foot Levee Raise; Alternative 3 - Maintenance Dredging With Upland Disposal and a 3-Foot Levee Raise; and Alternative 4 - Maintenance Dredging With Beneficial Use of Dredged Material and a 3-Foot Levee Raise (Recommended Plan/Preferred Alternative).

14. SUBJECT TERMS
dredging, dredged material, navigation maintenance, flow conveyance, inland waterway, Lower Snake River, Ice Harbor Reservoir, Lower Monumental Reservoir, Little Goose Reservoir, Lower Granite Reservoir, McNary Reservoir, Lewiston levee system

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FINAL DREDGED MATERIAL MANAGEMENT PLAN AND ENVIRONMENTAL IMPACT STATEMENT
McNary Reservoir and Lower Snake River Reservoirs

JULY 2002

ERRATA SHEET FOR APPENDIX B - COST ESTIMATES

This appendix has not been substantially changed from the draft and will not be reprinted. Please make the following changes to the draft appendix and consider the draft appendix with corrections as the final appendix.

Front cover:
Apply the attached label (FINAL, July 2002) on the front cover to the right of the draft date.

Footnotes throughout the appendix:
Change all footnote references from "Draft DMMP/EIS, October 2001" to "Final DMMP/EIS, July 2002."

Page B-II
Change the first bullet at the top of the page to read:
Mobilization from as far away as the mouth of the Columbia River was included to allow wider competition in contracting.

Page B-V
Change the third bullet from the bottom of the page to read:
Mobilization from as far away as the mouth of the Columbia River was included to allow wider competition in contracting.

Page B-VI
Add following the last bullet at the top of the page:
Disposal at the Joso site will actually require dredging of the access channel into the site at a cost during the first year of $95,332 including indirect costs. However, since this cost is less than 1 percent of the first-year dredging and site construction cost ($9,738,000), the Upland 3.a.b Cost Estimate was not revised. Details of the dredging cost breakdown can be seen in the Contingency Upland Disposal Cost Estimate on pages B-251 and B-252.

Section 3.1.3 Confluence Dredging - Snake and Clearwater Rivers [300,000 cy (229 367 m^3) Dredging Program]
Page B-VII
Change the title to read:
Template Dredging: Year 1 to end of project [300,000 cy (229 367 m^3)] and Upland Disposal Site Construction: Years 1, 21, 27, and 28

Section 3.1.3 Confluence Dredging - Snake and Clearwater Rivers [300,000 cy (229 367 m^3) Dredging Program]
Page B-VII
Change the 4th sentence from the end to read:
Construction of the RCC cap at the Chief Timothy transfer site and initial disposal in the Page Creek disposal site will occur in year 28.

*** * * END OF CHANGES * * ***

DREDGED MATERIAL MANAGEMENT PLAN AND ENVIRONMENTAL IMPACT STATEMENT

McNARY RESERVOIR AND LOWER SNAKE RIVER RESERVOIRS

APPENDIX B

COST ESTIMATES

U.S. Army Corps of Engineers
Walla Walla District
201 N. 3rd Avenue
Walla Walla, WA 99362

October 2001

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LIST OF ESTIMATES

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1.0 COST ESTIMATE SUMMARY - GENERAL

The following is a summary of the assumptions and parameters used to develop estimated costs for disposal of dredged material. Detailed estimates follow this summary in the same order as they are presented in the summary. The costs include overhead and profit, but escalation and contingencies have not been included in the calculations.

In the following discussions, the two general dredging operations are described as template dredging and template maintenance dredging. The term "template dredging" is used to describe the process of initial cleanout of the defined dredging template. "Template maintenance dredging" is used to describe the dredging required to keep the defined template free of sediment for the remainder of the study period. Larger annual quantities of dredged material are projected for the initial effort to create the dredging template. Smaller annual quantities are projected for the period focused on maintaining the established template.

2.0 IN-WATER DISPOSAL ESTIMATES

These planning level estimates for disposal of dredged materials using in-water disposal were produced utilizing the Cost Engineering Dredge Estimating Program (CEDEP). The Government Estimate is based on the following assumptions:

- Work will be conducted 24 hours per day in three 8-hour shifts per day, 7 days a week, considering four holidays. Overtime hours are anticipated.
- Dredging operations will begin on December 15 and shall not continue after February 28 in any given year due to the fish window requirements.
- The prime contractor will perform all work.
- All in-water disposal sites are accessible without further dredging requirements.
- Dredging will be accomplished using 15-cubic yard (cy) [11.5-cubic meter (m^3)] clamshell dredges in the Snake/Clearwater Rivers confluence area in the Lower Granite reservoir and 10-cy (7.6-m^3) clamshell dredges in the other reservoirs. The use of clamshells and scows has been considered due to the anticipated existence of silt type materials within the confluence areas.
- Dredged material will be transported to in-water disposal sites with scows. No overflow will be allowed.
- This work will take place during winter months, but no adverse weather conditions other than normal winter work weather have been assumed.
- The anticipated types of soil to be encountered are sand, silts, gravels, and cobbles.
- Considerations for delays due to traffic and coordination efforts have been accounted for within the effective working time.
- All necessary labor will be available within the project location.

- Equipment will be mobilized from as far away as the mouth of the Columbia River to allow contractors from Portland and Seattle to compete.
- Turbidity monitoring will be required during the dredging operation.
- Sieve analysis testing for coarse-grained and fine-grained materials will be required for determining which disposal area to use.
- All equipment is considered owned - no rental equipment is considered. All equipment other than dredging plant rates were computed based on Engineering Pamphlet (EP) 1110-1-8. All equipment other than dredging plant mobilization and demobilization costs are computed as 5 percent of direct costs.

2.1 Confluence Dredging - Snake and Clearwater Rivers

There are four different dredging programs proposed for the Snake/Clearwater Rivers confluence area. The Snake River dredging areas associated with the confluence dredging programs are assumed to extend from the vicinity of Silcott Island near Snake River Mile (RM) 131 to the U.S. Highway 12 Bridge upstream of the confluence of the Snake and Clearwater Rivers, located near Snake RM 139.5. The Clearwater River dredging areas are assumed to extend from the Snake/Clearwater Rivers confluence upstream to the Port of Lewiston (from Clearwater RM 0.00 to Clearwater RM 1.66). All material is assumed to be disposed of in-water at sites between Centennial Island located near Snake RM 120.5 and the upstream face of Lower Granite Dam (RM 108). The disposal sites are assumed adequate to contain all materials dredged.

The four dredging programs proposed for the Snake/Clearwater Rivers confluence area vary in the quantity of material removed annually. Two of the programs include an initial multi-year template dredging operation followed by a smaller-volume template maintenance dredging operation for the rest of the study period. The volumes and timing of the dredging associated with each of the programs are explained in the following sections.

2.1.1 Confluence Dredging - Snake and Clearwater Rivers [2 million cy (1 529 110 m^3) Dredging Program]

The 2 million cy (1 529 110 m^3) dredging program will consist of a template dredging operation and a template maintenance dredging operation.

2.1.1.1 Template Dredging: Years 1 through 20 [2 million cy (1 529 110 m^3) annually]

Dredging will be done to excavate the defined dredging template during the first 20 years of the project, removing 2 million cy (1 529 110 m^3) of material annually. Material will be hauled to designated spots and used to construct beneficial habitat. This portion of the work will cost approximately $4.5 million annually.

2.1.1.2 Template Maintenance Dredging: Year 21 to end of project [725,000 cy (554 302 m^3) annually]

Template maintenance dredging will continue from year 21 to the end of the project, removing approximately 725,000 cy (554 302 m^3) of material annually. Material will be hauled to designated spots and used to construct beneficial habitat. This portion of the work will cost approximately $2.4 million annually.

2.1.2 Confluence Dredging - Snake and Clearwater Rivers [1 million cy (764 555 m^3) Dredging Program]

The 1 million cy (764 555 m^3) dredging program will also consist of a template dredging operation and a template maintenance dredging operation.

2.1.2.1 Template Dredging: Years 1 through 10 [1 million cy (764 555 m^3) annually]

Dredging will be done to excavate the defined dredging template during the first 10 years of the project, removing 1 million cy (764 555 m^3) of material annually. Material will be hauled to designated spots and used to construct beneficial habitat. This portion of the work will cost approximately $2.4 million annually.

2.1.2.2 Template Maintenance Dredging: Year 11 to end of project [325,000 cy (248 480 m^3) annually]

Template maintenance dredging will continue from year 11 to the end of the project, removing approximately 325,000 cy (248 480 m^3) of material annually. Material will be hauled to designated spots and used to construct beneficial habitat. This portion of the work will cost approximately $1.3 million annually.

2.1.3 Confluence Dredging - Snake and Clearwater Rivers [300,000 cy (229 367 m^3) Dredging Program]

The 300,000 cy (229 367 m^3) dredging program includes only a template dredging component. Template dredging will continue throughout the project, removing approximately 300,000 cy (229 367 m^3) of material annually. Material will be hauled to designated spots and used to construct beneficial habitat. This portion of the work will cost approximately $1.2 million annually.

2.1.4 Confluence Dredging - Snake and Clearwater Rivers Maintenance Dredging Program

The navigation and facility maintenance dredging program will maintain the design templates of features within the confluence area such as the Federal navigation channel, recreational facilities, and irrigation intakes. Dredging will not extend outside the limits of the original design template of each feature.

Maintenance dredging will continue throughout the project, starting in year 5 and then again in year 10 when 41,500 cy (31 729 m^3) of material will be removed from within the authorized navigation channel. At 10-year intervals thereafter, an additional 41,500 cy (31 729 m^3) of material will be removed. Material will be hauled to designated spots and used to construct beneficial habitat. This portion of the work will cost approximately $389,000 each year dredging takes place.

2.2 Dredging McNary Reservoir [32,000 cy (24 466 m^3)]

The Columbia and Snake Rivers' McNary reservoir dredging areas are assumed to extend throughout the vicinity of the Ice Harbor Cut Navigation Channel from Snake RM 3 to Snake RM 9, located upstream of the confluence of the Columbia and Snake Rivers. All material is assumed to be disposed of between Columbia RM's 314.5 and 316.5.

Maintenance Dredging: 2-Year Intervals [32,000 cy (24 466 m^3)]

Dredging operations in the McNary reservoir will take place on a semi-annual basis, removing approximately 32,000 cy (24 466 m^3) with each effort. This portion of the work will cost approximately $297,000 semi-annually.

2.3 Dredging Ice Harbor Reservoir [2,000 cy (1 529 m^3)]

The Snake River's Ice Harbor reservoir dredging area is located downstream of Lower Monumental Dam. All material is assumed to be disposed of between Snake RM's 10 and 23.

Maintenance Dredging: 2-Year Intervals [2,000 cy (1 529 m^3)]

Dredging operations in the Ice Harbor reservoir will take place on a semi-annual basis, removing approximately 2,000 cy (1 529 m^3) with each effort. This portion of the work will cost approximately $192,000 semi-annually.

2.4 Dredging Lower Monumental Reservoir [2,000 cy (1 529 m^3)]

The Snake River's Lower Monumental reservoir dredging area is located downstream of Little Goose Dam and near the confluence of the Palouse and Snake Rivers. All material is assumed to be disposed of between Snake RM's 42 and 47.

Maintenance Dredging: 2-Year Intervals [2,000 cy (1 529 m^3)]

Dredging operations in the Lower Monumental reservoir will take place on a semi-annual basis, removing approximately 2,000 cy (1 529 m^3) with each effort. This portion of the work will cost approximately $230,000 semi-annually.

2.5 Dredging Little Goose Reservoir [4,000 cy (3 058 m^3)]

The Snake River's Little Goose reservoir dredging area is located downstream of Lower Granite Dam and at Schultz Bar, located near Snake RM 100. All material is assumed to be disposed of between Snake RM's 71 and 83.

Maintenance Dredging: 2-Year Intervals [4,000 cy (3 058 m^3)]

Dredging operations in the Little Goose reservoir will take place on a semi-annual basis, removing approximately 4,000 cy (3 058 m^3) with each effort. This portion of the work will cost approximately $248,000 semi-annually.

3.0 UPLAND DISPOSAL ESTIMATES

These planning level estimates were produced utilizing the MICRO Computer Aided Cost Estimating System (MCACES) and the CEDEP. The Government Estimate is based on the following assumptions:

- Work will be conducted 24 hours per day in three 8-hour shifts per day, 7 days a week, considering four holidays. Overtime hours are anticipated.
- Dredging operations will begin on December 15 and shall not continue after February 28 in any given year to comply with agency requirements that prohibit in-water work during periods of fish migration.
- The prime contractor will perform all work.
- All disposal transfer sites are accessible without further dredging requirements.
- Dredging will be accomplished using 10-cy (7.6-m^3) clamshell dredges and material will be transported on scows for disposal. The dredging material will be off-loaded from the barges on to the disposal area. The use of clamshells and scows has been considered due to the anticipated existence of silt type materials within the confluence areas.
- The anticipated types of soil to be encountered are sand, silts, gravels, and cobbles.
- Considerations for delays due to traffic and coordination efforts have been accounted for within the effective working time.
- No adverse weather conditions other than normal winter work weather have been assumed.
- All necessary labor will be available within the project location.
- Equipment will be mobilized from the mouth of the Columbia River to allow contractors from Portland and Seattle to compete.
- Turbidity monitoring will be required during the dredging operation.
- Sieve analysis testing for coarse-grained and fine-grained materials will be required for determining which disposal area to use.

- All equipment is considered owned - no rental equipment is considered. All equipment other than dredging plant rates were computed based on EP 1110-1-8. All equipment other than dredging plant mobilization and demobilization costs are computed as 5 percent of direct costs.

3.1 Confluence Dredging - Snake and Clearwater Rivers

For the upland disposal operation, the dredging programs are similar to those described for the in-water disposal operation. The dredging areas and volumes of dredged material removed are the same (see section 2.1), but the material is assumed to be disposed of in designated upland sites. The disposal sites are assumed to contain all materials dredged.

The following sections describe the dredging and disposal activities for the four dredging programs with emphasis on the development of the upland disposal sites.

3.1.1 Confluence Dredging - Snake and Clearwater Rivers [2 million cy (1 529 110 m^3) Dredging Program]

The 2 million cy (1 529 110 m^3) dredging program will consist of a template dredging operation and a template maintenance dredging operation.

3.1.1.1 Template Dredging: Years 1 through 20 [2 million cy (1 529 110 m^3)] and Upland Disposal Site Construction: Years 1 and 2

The initial construction of the Chief Timothy transfer site and the Page Creek upland disposal site will occur in year 1. Upland disposal of dredged materials during the first year will be restricted to temporary placement of the materials at the Chief Timothy transfer site. Year 2 will include construction of the Chief Timothy transfer site roller-compacted concrete (RCC) cap and upland disposal of dredged materials at Page Creek. Dredging will remove approximately 2 million cy (1 529 110 m^3) of material annually for the first 20 years to establish the defined dredging template. The estimated cost of this work is $33.4 million over the first 2 years and $20.2 million annually for years 3 through 20.

3.1.1.2 Template Maintenance Dredging: Year 21 to end of project [725,000 cy (554 302 m^3)]

Starting in year 21, the dredging operations would be scaled back, reducing the quantity of dredged material to 725,000 cy (554 302 m^3) annually. This amount of material would be disposed of at the Page Creek site through the remainder of the project. The estimated annual cost of this work is $8.3 million.

3.1.2 Confluence Dredging - Snake and Clearwater Rivers [1 million cy (764 555 m^3) Dredging Program]

The 1 million cy (764 555 m^3) dredging program will also consist of a template dredging operation and a template maintenance dredging operation.

3.1.2.1 Template Dredging: Years 1 through 10 [1 million cy (764 555 m^3)] and Upland Disposal Site Construction: Years 1 through 3

The initial construction of the Chief Timothy transfer site and the Page Creek upland disposal site will occur in year 1. Upland disposal of dredged materials during the first year will be restricted to temporary placement of the materials at the Chief Timothy transfer site. Year 3 will include construction of the Chief Timothy transfer site RCC cap and upland disposal of dredged materials at Page Creek. Dredging will remove approximately 1 million cy (764 555 m^3) of material annually for the first 10 years to establish the defined dredging template. The estimated cost of this work is $23.9 million over the first 3 years and $10.3 million annually for years 4 through 10.

3.1.2.2 Template Maintenance Dredging: Year 11 to end of project [325,000 cy (248 480 m^3)]

Starting in year 11, the dredging operations would be scaled back, reducing the quantity of dredged material to 325,000 cy (248 480 m^3) annually. This amount of material would be disposed of at the Page Creek site through the remainder of the project. The estimated annual cost of this work is $5.7 million.

3.1.3 Confluence Dredging - Snake and Clearwater Rivers [300,000 cy (229 367 m^3) Dredging Program]

Template Dredging: Year 1 to end of project [300,000 cy (229 367 m^3) and Upland Disposal Site Construction: Years 1, 21, and 27

The 300,000 cy (229 367 m^3) dredging program includes only a template dredging component. Template dredging will continue throughout the project, removing approximately 300,000 cy (229 367 m^3) of material annually. The upland disposal site at Joso will be constructed during the first year and dredged material will be deposited at the Joso site for the first 20 years of the project. In year 21, the Chief Timothy transfer site will be constructed. Starting in year 21 and continuing until year 28, all of the dredged material [300,000 cy (229 367 m^3) annually] will be used to develop the Chief Timothy transfer site. In year 27, construction of the Page Creek upland disposal site will begin. Construction of the RCC cap at the Chief Timothy transfer site and initial construction of the Page Creek disposal site will occur in year 28. The total cost of the work through year 28 is estimated at $122.6 million. From year 29 to the end of the project, the materials will be disposed of at the Page Creek site. The annual cost of this work is estimated at $3.6 million.

3.1.4 Confluence Dredging - Snake and Clearwater Rivers (Maintenance Dredging Program)

The navigation and facility maintenance dredging program will maintain the design templates of features within the confluence area such as the Federal navigation channel, recreational facilities,

and irrigation intakes. Dredging will not extend outside the limits of the original design template of each feature.

Construction of the Joso disposal site and disposal of 41,500 cy (31 729 m^3) of dredged material at the Joso site will occur in year 5. Maintenance dredging operations will dispose of an additional 41,500 cy (31 729 m^3) of material at the Joso site in year 10 and at 10-year intervals after that until the end of the project. Initial construction of the Joso disposal site and placement of 41,500 cy (31 729 m^3) of dredged material at the Joso site during the first year will cost $3.2 million. Disposal of an additional 41,500 cy (31 729 m^3) of dredged material during year 10 of the project will cost an additional $1 million. Disposal of 41,500 cy (31 729 m^3) at 10-year intervals during the remainder of the project will cost $1 million per operation.

3.2 Dredging McNary Reservoir [32,000 cy (24 466 m^3)]

The Columbia and Snake Rivers' McNary reservoir dredging areas are assumed to extend throughout the vicinity of the Ice Harbor Cut Navigation Channel from Snake RM 3 to Snake RM 9, located upstream of the confluence of the Columbia and Snake Rivers. All material is assumed to be disposed of in designated upland sites.

Maintenance Dredging: Year 1 to end of project [32,000 cy (24 466 m^3)] and Upland Disposal Site Construction: Year 1

The first year of operation will include construction of the Joso site and upland disposal of 32,000 cy (24 466 m^3) of dredged material. Semi-annual maintenance dredging will remove and dispose of 32,000 cy (24 466 m^3) of dredged material at the Joso site. Initial construction of the Joso disposal site and disposal of 32,000 cy (24 466 m^3) of material during the first year will cost $2.9 million. The remainder of the work will cost approximately $683,000 semi-annually.

3.3 Dredging Ice Harbor Reservoir [2,000 cy (1 529 m^3)]

The Snake River's Ice Harbor reservoir dredging area is located downstream of Lower Monumental Dam. All material is assumed to be disposed of in designated upland sites.

Maintenance Dredging: Year 1 to end of project [2,000 cy (1 529 m^3)]

Maintenance dredging will consist of removing 2,000 cy (1 529 m^3) annually from the Ice Harbor reservoir, hauling the material to the Joso site, and disposing of the material at the Joso site. This portion of the work will cost approximately $204,000 semi-annually.

3.4 Dredging Lower Monumental Reservoir [2,000 cy (1 529 m^3)]

The Snake River's Lower Monumental reservoir dredging area is located downstream of Little Goose Dam and near the confluence of the Palouse and Snake Rivers. All material is assumed to be disposed of in designated upland sites.

Maintenance Dredging: Year 1 to end of project [2,000 cy (1 529 m^3)]

Maintenance dredging will consist of removing 2,000 cy (1 529 m^3) semi-annually from the Lower Monumental reservoir, hauling the material to the Joso site, and disposing of the material at the Joso site. This portion of the work will cost approximately $208,000 semi-annually.

3.5 Dredging Little Goose Reservoir [4,000 cy (3 058 m^3)]

The Snake River's Little Goose reservoir dredging area is located downstream of Lower Granite Dam and at Schultz Bar, near Snake RM 100. All material is assumed to be disposed of in designated upland sites.

Maintenance Dredging: Year 1 to end of project [4,000 cy (3 058 m^3)]

Maintenance dredging will consist of removing 4,000 cy (3 058 m^3) semi-annually from the Little Goose reservoir, hauling the material to the Joso site, and disposing of the material at the Joso site. This portion of the work will cost approximately $244,000 semi-annually.

3.6 Dredging Contaminated Material [7,000 cy (5 352 m^3)]

The Snake River dredging areas are assumed to extend from the vicinity of Silcott Island near Snake RM 131 to the State Highway 12 Bridge upstream of the confluence of the Snake and Clearwater Rivers, located near Snake RM 139.5. The Clearwater River dredging areas are assumed to extend from the Snake/Clearwater Rivers confluence upstream to the Port of Lewiston (from Clearwater RM 0.00 to Clearwater RM 1.66). All material is assumed to be disposed of utilizing a disposal area at Joso near Snake RM 56. The disposal site is assumed adequate to contain all materials dredged. It is anticipated that, on an annual basis, approximately 7,000 cy (5 352 m^3) of material will be dredged that will be determined to contain contaminated materials that will require upland disposal at a site designed to contain such materials. A site will be developed at Joso that is appropriate for containment of contaminated materials.

Maintenance Dredging: Year 1 to end of project [7,000 cy (5 352 m^3)] and Joso Contingency Upland Disposal Site Construction: Year 1

Initial construction of the Joso disposal site and disposal of approximately 7,000 cy (5 352 m^3) of contaminated dredged material will take place in the first year. The estimated cost of initial construction, dredging, and disposal of materials in the first year is $11,612,000. It was assumed that disposal of approximately 7,000 cy (5 352 m^3) of contaminated dredged material will take place each confluence dredging operation. The estimated cost of this work is $230,000 per year that dredging takes place in the confluence area.

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In-Water Summary

Dredge Material
Management Study
Dredging of Snake and Clearwater Rivers
In-water Disposal

Revision #1
8/2/99

Description	Years	Estimated Quantity	U/M	Total $ Costs Each Year of Dredging
Item 1 - Confluence Dredging Snake & Clearwater Rivers				
Item 1.a Template dredge operation	1-20	2,000,000	cy	**$4,451,000**
Item 1.b Template maintenance dredge operation	21-end	725,000	cy	**$2,367,000**
Item 2 - Confluence Dredging Snake & Clearwater Rivers				
Item 2.a Template dredge operation	1-10	1,000,000	cy	**$2,416,000**
Item 2.b Template maintenance dredge operation	11-end	325,000	cy	**$1,280,000**
Item 3 - Confluence Dredging Snake & Clearwater Rivers				
Item 3.a Template dredge operation	1-end	300,000	cy	**$1,201,000**
Item 4 - Confluence Dredging Snake & Clearwater Rivers				
Item 4.a Template maintenance dredge operation	5, 10, 10-yr intervals	41,500	cy	**$389,000**
Item 5 - Dredging McNary Pool				
Item 5.a Template maintenance dredge operation	1-end at 2-yr intervals	32,000	cy	**$297,000**
Item 6 - Dredging Ice Harbor Pool				
Item 6.a Template maintenance dredge operation	1-end at 2-yr intervals	2,000	cy	**$192,000**
Item 7 - Dredging Lower Monumental Pool				
Item 7.a Template maintenance dredge operation	1-end at 2-yr intervals	2,000	cy	**$230,000**
Item 8 - Dredging Little Goose Pool				
Item 8.a Template maintenance dredge operation	1-end at 2-yr intervals	4,000	cy	**$248,000**

Note: Total Costs include Overhead and Profit.
Escalation and contingencies are not included.

Points of Contact:
Lead Estimator - Bob Hynek (509)527-7513
Estimator - Julie Davin (509)527-7514

In-Water 1.a

Dredging 2 Millcy Confl. Inwater
DMMS Dredging
of Snake & Clearwater Rivers
with Inwater Disposal

Designed By: Walla Walla District COE
Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch
Kim Callan, Chief

Preparation Date: 05/28/99
Effective Date of Pricing: 05/01/99
Est Construction Time: 60 Days

Sales Tax: 7.90%

Project Description:
The Snake River dredging areas are assumed to extend from the vicinity of Silcott Island near Snake River Mile 131 upstream to the State Highway 12 bridge upstream of the confluence of the Snake and Clearwater Rivers, located near Snake River Mile 139.5. The Clearwater River dredging areas are assumed to extend from the Snake River confluence upstream to the Port of Lewiston, from Clearwater River Mile 0.00 to Clearwater River Mile 1.66.
All material assumed to be disposed of from downstream of Centennial Island located near Snake River Mile 120.5 to the upstream face of Lower Granite Dam River Mile 108. The disposal site is assumed adequate to contain all materials dredged.

Basis of Design:
Planning level estimate produced utilizing the Cost Engineering Dredge Estimating Program (CEDEP)

Overtime:
Overtime is anticipated. The Government Estimate is based on a 24 hour operation. Work shall be conducted on a 24 hr/day, 3-8 hour shifts/day, 7 days/week, considering 4 holidays.

Construction Windows:
Dredging operations will begin on 15 December, and shall not continue after 28 Feb, in any given year, due to the fish window requirements.

Sub Contracting Plan:
No Sub Contracting considered all work to be performed by Prime Contractor.

Site Access:
It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

Construction Methodology:
Common dredging methods using 15cy clamshell dredges, with the use of scows for in-water disposal.

Conditions:
This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

Equipment/Labor Availability & Distance Traveled:
Assume labor will be available within the project location. Equipment Mobilization will be from the Mouth of the Columbia River to the Confluence of the Snake and Clearwater Rivers, approximately 463 River Miles to allow contractors from Portland & Seattle to compete.

Environmental Concerns:
Turbidity monitoring will be required during the dredging operation. Sieve

analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

Effective dates for:
Labor: General Decision Number WA990001, Modification #1 dated 3/1/99.
Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Historical Dredging Equipment information.

0.01. Prime Contractor (AA)	QUANTY	UOM	MHRS	LAB	EQUIP	MAT	OTHER	TOTAL COST	UNIT COST

0.01. Prime Contractor (AA)

0.01. Prime Contractor (AA)	QUANTY UOM	MHRS	LAB	EQUIP	MAT	OTHER	TOTAL COST	UNIT COST
0.01. 0. Overhead Items - AA								
0.01. 0.11. Job Office Overhead								
0.01. 0.11. A. Supervision and Management								
Includes all top field management personnel, superintendents and non-working foremen, and their subsistence, travel, vehicles, supplies and miscellaneous. ***								
L FOP < > General Superintendent		0.00	6073.59	0.00	0.00	0.00	6073.59	
	2.00 MO	0	12,147	0	0	0	12,147	6073.59
TOTAL Supervision and Management	1.00 MO	0	12,147	0	0	0	12,147	12147.18

0.01. Prime Contractor (AA)			QUANTY	UOM	MHRS	LAB	EQUIP	MAT	OTHER	TOTAL COST	UNIT COST
0.01. 0.11.	B. Administration Job Office Includes the field office and all field administrating, accounting purchasing inventory, security, and personnel. Also their subsistence and travel, offices, vehicles, supplies and miscellaneous items to run the field office are included here. See item (C) for warehouse and warehouse personnel. ***										
FOP	<	> Payroll Timekeepers			0.00	1776.66	0.00	0.00	0.00	1776.66	
			2.00	MO	0	3,553	0	0	0	3,553	1776.66
USR	<	> Office - Supplies Assume 5% of Office Labor costs.			0.00	0.00	0.00	539.37	0.00	539.37	
			2.00	MO	0	0	0	1,079	0	1,079	539.37
USR	<	> Telephone Usage Fees			0.00	0.00	0.00	0.00	200.00	200.00	
			2.00	MO	0	0	0	0	400	400	200.00
		TOTAL Administration Job Office	1.00	MO	0	3,553	0	1,079	400	5,032	5032.07

0.01. Prime Contractor (AA)			QUANTY	UOM	MHRS	LAB	EQUIP	MAT	OTHER	TOTAL COST	UNIT COST
0.01. 0.11.	E. Quality Control and Testing Includes personnel, vehicles, equipment, and supplies to produce all QC reports, QC inspections, and all other contract quality requirements. Also includes their subsistence and travel, vehicles, supplies and miscellaneous items. ***										
	USR	< > Prepare QC Plan			0.00	0.00	0.00	0.00	1000.00	1000.00	
			2.00	EA	0	0	0	0	2,000	2,000	1000.00
	M CIV	<01440 1161 > Mobile Laboratory 22'Long Rented (for field testing) Testing Equipment not included.			0.00	0.00	0.00	161.91	0.00	161.91	
			2.00	MO	0	0	0	324	0	324	161.91
	L CIV	<01525 1113 > 4x4 3/4T Pickup (Monthly Cost) Assume 2/3-time Standby			0.00	0.00	671.99	0.00	0.00	671.99	
			2.00	MO	0	0	1,344	0	0	1,344	671.99
		TOTAL Quality Control and Testing	1.00	MO	0	0	1,344	324	2,000	3,668	3667.81

0.01. Prime Contractor (AA)		QUANTY	UOM	MHRS	LAB	EQUIP	MAT	OTHER	TOTAL COST	UNIT COST
0.01. 0.11.	G. Sanitation Fac & Temp Bldgs Includes sanitation facilities, misc. buildings, yards, and building costs not otherwise classified. But it does not include all utilities costs. ***									
M CIV	<01510 6211 > Construction Portable Toilet			0.00	0.00	0.00	80.86	0.00	80.86	
	Weekly Service	2.00	MO	0	0	0	162	0	162	80.86
	TOTAL Sanitation Fac & Temp Bldgs	1.00	MO	0	0	0	162	0	162	161.72

0.01. Prime Contractor (AA)				QUANTY	UOM	MHRS	LAB	EQUIP	MAT	OTHER	TOTAL COST	UNIT COST
0.01. 0.11.	H. General Equipment Expenses Includes equipment not required by specific work items. Also includes testing and rental of equipment when not charged to a specific bid item or items of work. Inspection fees and permits are included in mob and demob items. *****											
	MIL	<	> CR,ME,CWLR,LIFTING, 85T/160'BOOM	40.00	HR	0.00 0	0.00 0	88.33 3,533	0.00 0	0.00 0	88.33 3,533	88.33
	L CIV	<01525 2124	> Crane Testing - 75 to 100 tons Allow four hours per test.	1.00	EA	12.00 12	396.40 396	294.17 294	0.00 0	0.00 0	690.57 691	690.57
	L USR	<01525 1111	> Sedan/Pickup (Monthly Cost) Assume 2/3-time Standby	2.00	MO	0.00 0	0.00 0	425.16 850	0.00 0	0.00 0	425.16 850	425.16
	MIL	<	> LITE SET, 2L/1000W, 5KW-GEN,TRLR REF. EP 1110-1-8 5.0 KW 2/1000W, W/GEN SET, TRLR MTD	852.00	HR	0.00 0	0.00 0	4.63 3,947	0.00 0	0.00 0	4.63 3,947	4.63
		TOTAL	General Equipment Expenses	1.00	MO	12	396	8,625	0	0	9,021	9021.36
		TOTAL	Job Office Overhead	1.00	MO	12	16,097	9,969	1,564	2,400	30,030	30030.13
		TOTAL	Overhead Items - AA			12	16,097	9,969	1,564	2,400	30,030	

01.12. Navigation, Ports & Harbors	QUANTY	UOM	MHRS	LAB	EQUIP	MAT	OTHER	TOTAL COST	UNIT COST
01. Snake River DMMS 99									
01.12. Navigation, Ports & Harbors									
01.12.06. Dredging Rivers									
01.12.06.01. Mechanical Dredging									
01.12.06.01.001-. Mob. & Demob. Equipment									
01.12.06.01.001-_01AA. Mob. & Demob. Excavation Dredges									
USR AA < > Mob & Demob.Main Dredging Equip.			0.00	0.00	0.00	0.00	280562.00	280562.00	
Clam to Lewiston	1.00	JB	0	0	0	0	280,562	280,562	280562.00
TOTAL Mob. & Demob. Excavation Dredges	1.00	JB	0	0	0	0	280,562	280,562	280562.00
TOTAL Mob. & Demob. Equipment	1.00	JB	0	0	0	0	280,562	280,562	280562.00

01.12. Navigation, Ports & Harbors	QUANTY	UOM	MHRS	LAB	EQUIP	MAT	OTHER	TOTAL COST	UNIT COST
01.12.06.01.002-. Dredge, Haul & Off-load Material Includes a cost of .05 cents per cy for dewatering barge.									
01.12.06.01.002-_02BB. Dredging & Haul Mat. to Disposal Includes a cost of .05 cents per cy for dewatering barge.									
USR AA < > Cost of Dredging Material Costs were developed in CEDEP see backup	2000000	CY	0.00 0	0.00 0	0.00 0	0.00 0	1.70 3,400,000	1.70 3,400,000	1.70
TOTAL Dredging & Haul Mat. to Disposal	2000000	CY	0	0	0	0	3,400,000	3,400,000	1.70
TOTAL Dredge, Haul & Off-load Material	2000000	CY	0	0	0	0	3,400,000	3,400,000	1.70
TOTAL Mechanical Dredging	1.00	EA	0	0	0	0	3,680,562	3,680,562	3680562
TOTAL Dredging Rivers	1.00	EA	0	0	0	0	3,680,562	3,680,562	3680562
TOTAL Navigation, Ports & Harbors	1.00	EA	0	0	0	0	3,680,562	3,680,562	3680562
TOTAL Snake River DMMS 99	1.00	EA	0	0	0	0	3,680,562	3,680,562	3680562
TOTAL Dredging 2 Millcy Confl. Inwater	1.00	EA	0	0	0	0	3,680,562	3,680,562	3680562

	QUANTITY	UOM	TOTAL DIRECT	FOOH	HOOH	PROF	Misc Ta	BOND	TOTAL COST	UNIT COST
01 Snake River DMMS 99										
01.12 Navigation, Ports & Harbors										
01.12.06 Dredging Rivers										
01.12.06.01 Mechanical Dredging										
01.12.06.01.001- Mob. & Demob. Equipment										
01.12.06.01.001-_01AA Mob. & Demob. Excavation Dredges	1.00	JB	280,562	2,289	22,628	30,548	0	3,263	339,291	339290.58
TOTAL Mob. & Demob. Equipment	1.00	JB	280,562	2,289	22,628	30,548	0	3,263	339,291	339290.58
01.12.06.01.002- Dredge, Haul & Off-load Material										
01.12.06.01.002-_02BB Dredging & Haul Mat. to Disposal	2000000	CY	3,400,000	27,741	274,219	370,196	0	39,548	4,111,704	2.06
TOTAL Dredge, Haul & Off-load Material	2000000	CY	3,400,000	27,741	274,219	370,196	0	39,548	4,111,704	2.06
TOTAL Mechanical Dredging	1.00	EA	3,680,562	30,030	296,847	400,744	0	42,811	4,450,995	4450995
TOTAL Dredging Rivers	1.00	EA	3,680,562	30,030	296,847	400,744	0	42,811	4,450,995	4450995
TOTAL Navigation, Ports & Harbors	1.00	EA	3,680,562	30,030	296,847	400,744	0	42,811	4,450,995	4450995
TOTAL Snake River DMMS 99	1.00	EA	3,680,562	30,030	296,847	400,744	0	42,811	4,450,995	4450995
TOTAL Dredging 2 Millcy Confl. Inwater	1.00	EA	3,680,562	30,030	296,847	400,744	0	42,811	4,450,995	4450995

No errors detected...

* * * END OF ERROR REPORT * * *

No Backup Reports...

* * * END TABLE OF CONTENTS * * *

In-Water 1.b

Dredging 725K cy Confl. Inwater
DMMS Dredging
of Snake & Clearwater Rivers
with Inwater Disposal

Designed By: Walla Walla District COE
Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch
Kim Callan, Chief

Preparation Date: 05/28/99
Effective Date of Pricing: 05/01/99
Est Construction Time: 60 Days

Sales Tax: 7.90%

Project Description:
The Snake River dredging areas are assumed to extend from the vicinity of Silcott Island near Snake River Mile 131 upstream to the State Highway 12 bridge upstream of the confluence of the Snake and Clearwater Rivers, located near Snake River Mile 139.5. The Clearwater River dredging areas are assumed to extend from the Snake River confluence upstream to the Port of Lewiston, from Clearwater River Mile 0.00 to Clearwater River Mile 1.66.
All material assumed to be disposed of from downstream of Centennial Island located near Snake River Mile 120.5 to the upstream face of Lower Granite Dam River Mile 108. The disposal site is assumed adequate to contain all materials dredged.

Basis of Design:
Planning level estimate produced utilizing the Cost Engineering Dredge Estimating Program (CEDEP)

Overtime:
Overtime is anticipated. The Government Estimate is based on a 24 hour operation. Work shall be conducted on a 24 hr/day, 3-8 hour shifts/day, 7 days/week, considering 4 holidays.

Construction Windows:
Dredging operations will begin on 15 December, and shall not continue after 28 Feb, in any given year, due to the fish window requirements.

Sub Contracting Plan:
No Sub Contracting considered all work to be performed by Prime Contractor.

Site Access:
It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

Construction Methodology:
Common dredging methods using 15cy clamshell dredges, with the use of scows for in-water disposal.

Conditions:
This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

Equipment/Labor Availability & Distance Traveled:
Assume labor will be available within the project location. Equipment Mobilization will be from the Mouth of the Columbia River to the Confluence of the Snake and Clearwater Rivers, approximately 463 River Miles to allow contractors from Portland & Seattle to compete.

Environmental Concerns:
Turbidity monitoring will be required during the dredging operation. Sieve

analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

Effective dates for:
Labor: General Decision Number WA990001, Modification #1 dated 3/1/99.
Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Historical Dredging Equipment information.

	QUANTITY	UOM	TOTAL DIRECT	FOOH	HOOH	PROF	Misc Ta	BOND	TOTAL COST	UNIT COST
01 Snake River DMMS 99										
01.12 Navigation, Ports & Harbors										
01.12.06 Dredging Rivers										
01.12.06.01 Mechanical Dredging										
01.12.06.01.001- Mob. & Demob. Equipment										
01.12.06.01.001-_01AA Mob. & Demob. Excavation Dredges	1.00	JB	249,868	3,870	20,299	27,404	0	3,465	304,906	304905.68
TOTAL Mob. & Demob. Equipment	1.00	JB	249,868	3,870	20,299	27,404	0	3,465	304,906	304905.68
01.12.06.01.002- Dredge, Haul & Off-load Material										
01.12.06.01.002-_02BB Dredging & Haul Mat. to Disposal	725000.00	CY	1,689,250	26,161	137,233	185,264	0	23,428	2,061,336	2.84
TOTAL Dredge, Haul & Off-load Material	725000.00	CY	1,689,250	26,161	137,233	185,264	0	23,428	2,061,336	2.84
TOTAL Mechanical Dredging	1.00	EA	1,939,118	30,030	157,532	212,668	0	26,893	2,366,242	2366242
TOTAL Dredging Rivers	1.00	EA	1,939,118	30,030	157,532	212,668	0	26,893	2,366,242	2366242
TOTAL Navigation, Ports & Harbors	1.00	EA	1,939,118	30,030	157,532	212,668	0	26,893	2,366,242	2366242
TOTAL Snake River DMMS 99	1.00	EA	1,939,118	30,030	157,532	212,668	0	26,893	2,366,242	2366242
TOTAL Dredging 725K cy Confl. Inwater	1.00	EA	1,939,118	30,030	157,532	212,668	0	26,893	2,366,242	2366242

No errors detected...

* * * END OF ERROR REPORT * * *

No Detailed Estimate...

No Backup Reports...

* * * END TABLE OF CONTENTS * * *

In-Water 2.a

Dredging 1 Millcy Confl. Inwater
DMMS Dredging
of Snake & Clearwater Rivers
with Inwater Disposal

Designed By: Walla Walla District COE
Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch
Kim Callan, Chief

Preparation Date: 05/28/99
Effective Date of Pricing: 05/01/99
Est Construction Time: 60 Days

Sales Tax: 7.90%

Project Description:
The Snake River dredging areas are assumed to extend from the vicinity of Silcott Island near Snake River Mile 131 upstream to the State Highway 12 bridge upstream of the confluence of the Snake and Clearwater Rivers, located near Snake River Mile 139.5. The Clearwater River dredging areas are assumed to extend from the Snake River confluence upstream to the Port of Lewiston, from Clearwater River Mile 0.00 to Clearwater River Mile 1.66.
All material assumed to be disposed of from downstream of Centennial Island located near Snake River Mile 120.5 to the upstream face of Lower Granite Dam River Mile 108. The disposal site is assumed adequate to contain all materials dredged.

Basis of Design:
Planning level estimate produced utilizing the Cost Engineering Dredge Estimating Program (CEDEP)

Overtime:
Overtime is anticipated. The Government Estimate is based on a 24 hour operation. Work shall be conducted on a 24 hr/day, 3-8 hour shifts/day, 7 days/week, considering 4 holidays.

Construction Windows:
Dredging operations will begin on 15 December, and shall not continue after 28 Feb, in any given year, due to the fish window requirements.

Sub Contracting Plan:
No Sub Contracting considered all work to be performed by Prime Contractor.

Site Access:
It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

Construction Methodology:
Common dredging methods using 15cy clamshell dredges, with the use of scows for in-water disposal.

Conditions:
This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

Equipment/Labor Availability & Distance Traveled:
Assume labor will be available within the project location. Equipment Mobilization will be from the Mouth of the Columbia River to the Confluence of the Snake and Clearwater Rivers, approximately 463 River Miles to allow contractors from Portland & Seattle to compete.

Environmental Concerns:
Turbidity monitoring will be required during the dredging operation. Sieve

analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

Effective dates for:
Labor: General Decision Number WA990001, Modification #1 dated 3/1/99.
Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Historical Dredging Equipment information.

		QUANTITY	UOM	TOTAL DIRECT	FOOH	HOOH	PROF	Misc Ta	BOND	TOTAL COST	UNIT COST
01 Snake River DMMS 99											
01.12 Navigation, Ports & Harbors											
01.12.06 Dredging Rivers											
01.12.06.01 Mechanical Dredging											
01.12.06.01.001- Mob. & Demob. Equipment											
01.12.06.01.001-_01AA	Mob. & Demob. Excavation Dredges	1.00	JB	280,562	4,254	22,785	30,760	0	3,879	342,241	342240.87
	TOTAL Mob. & Demob. Equipment	1.00	JB	280,562	4,254	22,785	30,760	0	3,879	342,241	342240.87
01.12.06.01.002- Dredge, Haul & Off-load Material											
01.12.06.01.002-_02BB	Dredging & Haul Mat. to Disposal	1000000	CY	1,700,000	25,776	138,062	186,384	0	23,506	2,073,729	2.07
	TOTAL Dredge, Haul & Off-load Material	1000000	CY	1,700,000	25,776	138,062	186,384	0	23,506	2,073,729	2.07
	TOTAL Mechanical Dredging	1.00	EA	1,980,562	30,030	160,847	217,144	0	27,386	2,415,970	2415970
	TOTAL Dredging Rivers	1.00	EA	1,980,562	30,030	160,847	217,144	0	27,386	2,415,970	2415970
	TOTAL Navigation, Ports & Harbors	1.00	EA	1,980,562	30,030	160,847	217,144	0	27,386	2,415,970	2415970
	TOTAL Snake River DMMS 99	1.00	EA	1,980,562	30,030	160,847	217,144	0	27,386	2,415,970	2415970
	TOTAL Dredging 1 Millcy Confl. Inwater	1.00	EA	1,980,562	30,030	160,847	217,144	0	27,386	2,415,970	2415970

No errors detected...

* * * END OF ERROR REPORT * * *

LABOR ID: NWW99D EQUIP ID: NAT97C Currency in DOLLARS CREW ID: NAT99A UPB ID: UP99EA

No Detailed Estimate...

No Backup Reports...

* * * END TABLE OF CONTENTS * * *

In-Water 2.b

Dredging 325K cy Confl. Inwater
DMMS Dredging
of Snake & Clearwater Rivers
with Inwater Disposal

Designed By: Walla Walla District COE
Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch
Kim Callan, Chief

Preparation Date: 05/28/99
Effective Date of Pricing: 05/01/99
Est Construction Time: 60 Days

Sales Tax: 7.90%

Project Description:
The Snake River dredging areas are assumed to extend from the vicinity of Silcott Island near Snake River Mile 131 upstream to the State Highway 12 bridge upstream of the confluence of the Snake and Clearwater Rivers, located near Snake River Mile 139.5. The Clearwater River dredging areas are assumed to extend from the Snake River confluence upstream to the Port of Lewiston, from Clearwater River Mile 0.00 to Clearwater River Mile 1.66.
All material assumed to be disposed of from downstream of Centennial Island located near Snake River Mile 120.5 to the upstream face of Lower Granite Dam River Mile 108. The disposal site is assumed adequate to contain all materials dredged.

Basis of Design:
Planning level estimate produced utilizing the Cost Engineering Dredge Estimating Program (CEDEP)

Overtime:
Overtime is anticipated. The Government Estimate is based on a 24 hour operation. Work shall be conducted on a 24 hr/day, 3-8 hour shifts/day, 7 days/week, considering 4 holidays.

Construction Windows:
Dredging operations will begin on 15 December, and shall not continue after 28 Feb, in any given year, due to the fish window requirements.

Sub Contracting Plan:
No Sub Contracting considered all work to be performed by Prime Contractor.

Site Access:
It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

Construction Methodology:
Common dredging methods using 15cy clamshell dredges, with the use of scows for in-water disposal.

Conditions:
This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

Equipment/Labor Availability & Distance Traveled:
Assume labor will be available within the project location. Equipment Mobilization will be from the Mouth of the Columbia River to the Confluence of the Snake and Clearwater Rivers, approximately 463 River Miles to allow contractors from Portland & Seattle to compete.

Environmental Concerns:
Turbidity monitoring will be required during the dredging operation. Sieve

analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

Effective dates for:
Labor: General Decision Number WA990001, Modification #1 dated 3/1/99.
Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Historical Dredging Equipment information.

		QUANTITY	UOM	TOTAL DIRECT	FOOH	HOOH	PROF	Misc Ta	BOND	TOTAL COST	UNIT COST
01 Snake River DMMS 99											
01.12 Navigation, Ports & Harbors											
01.12.06 Dredging Rivers											
01.12.06.01 Mechanical Dredging											
01.12.06.01.001- Mob. & Demob. Equipment											
01.12.06.01.001-_01AA	Mob. & Demob. Excavation Dredges	1.00	JB	169,157	4,914	13,926	18,800	0	2,641	209,438	209437.62
	TOTAL Mob. & Demob. Equipment	1.00	JB	169,157	4,914	13,926	18,800	0	2,641	209,438	209437.62
01.12.06.01.002- Dredge, Haul & Off-load Material											
01.12.06.01.002-_02BB	Dredging, Haul Mat. to Disposal	325000.00	CY	864,500	25,116	71,169	96,079	0	13,496	1,070,360	3.29
	TOTAL Dredge, Haul & Off-load Material	325000.00	CY	864,500	25,116	71,169	96,079	0	13,496	1,070,360	3.29
	TOTAL Mechanical Dredging	1.00	EA	1,033,657	30,030	85,095	114,878	0	16,137	1,279,797	1279797
	TOTAL Dredging Rivers	1.00	EA	1,033,657	30,030	85,095	114,878	0	16,137	1,279,797	1279797
	TOTAL Navigation, Ports & Harbors	1.00	EA	1,033,657	30,030	85,095	114,878	0	16,137	1,279,797	1279797
	TOTAL Snake River DMMS 99	1.00	EA	1,033,657	30,030	85,095	114,878	0	16,137	1,279,797	1279797
	TOTAL Dredging 325K cy Confl. Inwater	1.00	EA	1,033,657	30,030	85,095	114,878	0	16,137	1,279,797	1279797

No errors detected...

* * * END OF ERROR REPORT * * *

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* * * END TABLE OF CONTENTS * * *

In-Water 3.a

Dredging 300K cy Confl. Inwater
DMMS Dredging
of Snake & Clearwater Rivers
with Inwater Disposal

Designed By: Walla Walla District COE
Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch
Kim Callan, Chief

Preparation Date: 05/28/99
Effective Date of Pricing: 05/01/99
Est Construction Time: 60 Days

Sales Tax: 7.90%

Project Description:
The Snake River dredging areas are assumed to extend from the vicinity of Silcott Island near Snake River Mile 131 upstream to the State Highway 12 bridge upstream of the confluence of the Snake and Clearwater Rivers, located near Snake River Mile 139.5. The Clearwater River dredging areas are assumed to extend from the Snake River confluence upstream to the Port of Lewiston, from Clearwater River Mile 0.00 to Clearwater River Mile 1.66.
All material assumed to be disposed of from downstream of Centennial Island located near Snake River Mile 120.5 to the upstream face of Lower Granite Dam River Mile 108. The disposal site is assumed adequate to contain all materials dredged.

Basis of Design:
Planning level estimate produced utilizing the Cost Engineering Dredge Estimating Program (CEDEP)

Overtime:
Overtime is anticipated. The Government Estimate is based on a 24 hour operation. Work shall be conducted on a 24 hr/day, 3-8 hour shifts/day, 7 days/week, considering 4 holidays.

Construction Windows:
Dredging operations will begin on 15 December, and shall not continue after 28 Feb, in any given year, due to the fish window requirements.

Sub Contracting Plan:
No Sub Contracting considered all work to be performed by Prime Contractor.

Site Access:
It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

Construction Methodology:
Common dredging methods using 15cy clamshell dredges, with the use of scows for in-water disposal.

Conditions:
This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

Equipment/Labor Availability & Distance Traveled:
Assume labor will be available within the project location. Equipment Mobilization will be from the Mouth of the Columbia River to the Confluence of the Snake and Clearwater Rivers, approximately 463 River Miles to allow contractors from Portland & Seattle to compete.

Environmental Concerns:
Turbidity monitoring will be required during the dredging operation. Sieve

analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

Effective dates for:
Labor: General Decision Number WA990001, Modification #1 dated 3/1/99.
Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Historical Dredging Equipment information.

	QUANTITY	UOM	TOTAL DIRECT	FOOH	HOOH	PROF	Misc Ta	BOND	TOTAL COST	UNIT COST
01 Snake River DMMS 99										
01.12 Navigation, Ports & Harbors										
01.12.06 Dredging Rivers										
01.12.06.01 Mechanical Dredging										
01.12.06.01.001- Mob. & Demob. Equipment										
01.12.06.01.001-_01AA Mob. & Demob. Excavation Dredges	1.00	JB	169,157	5,252	13,953	18,836	0	2,684	209,882	209882.45
TOTAL Mob. & Demob. Equipment	1.00	JB	169,157	5,252	13,953	18,836	0	2,684	209,882	209882.45
01.12.06.01.002- Dredge, Haul & Off-load Material										
01.12.06.01.002-_02BB Dredging, Haul Mat. to Disposal	300000.00	CY	798,000	24,778	65,822	88,860	0	12,662	990,123	3.30
TOTAL Dredge, Haul & Off-load Material	300000.00	CY	798,000	24,778	65,822	88,860	0	12,662	990,123	3.30
TOTAL Mechanical Dredging	1.00	EA	967,157	30,030	79,775	107,696	0	15,347	1,200,005	1200005
TOTAL Dredging Rivers	1.00	EA	967,157	30,030	79,775	107,696	0	15,347	1,200,005	1200005
TOTAL Navigation, Ports & Harbors	1.00	EA	967,157	30,030	79,775	107,696	0	15,347	1,200,005	1200005
TOTAL Snake River DMMS 99	1.00	EA	967,157	30,030	79,775	107,696	0	15,347	1,200,005	1200005
TOTAL Dredging 300K cy Confl. Inwater	1.00	EA	967,157	30,030	79,775	107,696	0	15,347	1,200,005	1200005

No errors detected...

* * * END OF ERROR REPORT * * *

Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DMM300: Dredging 300K cy Confl. Inwater - DMMS Dredging
PLANNING ESTIMATE

No Detailed Estimate...

No Backup Reports...

* * * END TABLE OF CONTENTS * * *

In-Water 4.a

Dredging 41.5K cy Confl. Inwater
DMMS Dredging
of Snake & Clearwater Rivers
with Inwater Disposal

Designed By: Walla Walla District COE
Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch
Kim Callan, Chief

Preparation Date: 05/28/99
Effective Date of Pricing: 03/01/99
Est Construction Time: 60 Days

Sales Tax: 7.90%

Project Description:
The Snake River dredging areas are assumed to extend from the vicinity of Silcott Island near Snake River Mile 131 upstream to the State Highway 12 bridge upstream of the confluence of the Snake and Clearwater Rivers, located near Snake River Mile 139.5. The Clearwater River dredging areas are assumed to extend from the Snake River confluence upstream to the Port of Lewiston, from Clearwater River Mile 0.00 to Clearwater River Mile 1.66.
All material assumed to be disposed of from downstream of Centennial Island located near Snake River Mile 120.5 to the upstream face of Lower Granite Dam River Mile 108. The disposal site is assumed adequate to contain all materials dredged.

Basis of Design:
Planning level estimate produced utilizing the Cost Engineering Dredge Estimating Program (CEDEP)

Overtime:
Overtime is anticipated. The Government Estimate is based on a 24 hour operation. Work shall be conducted on a 24 hr/day, 3-8 hour shifts/day, 7 days/week, considering 4 holidays.

Construction Windows:
Dredging operations will begin on 15 December, and shall not continue after 28 Feb, in any given year, due to the fish window requirements.

Sub Contracting Plan:
No Sub Contracting considered all work to be performed by Prime Contractor.

Site Access:
It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

Construction Methodology:
Common dredging methods using 15cy clamshell dredges, with the use of scows for in-water disposal.

Conditions:
This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

Equipment/Labor Availability & Distance Traveled:
Assume labor will be available within the project location. Equipment Mobilization will be from the Mouth of the Columbia River to the Confluence of the Snake and Clearwater Rivers, approximately 463 River Miles to allow contractors from Portland & Seattle to compete.

Environmental Concerns:
Turbidity monitoring will be required during the dredging operation. Sieve

analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

Effective dates for:
Labor: General Decision Number WA990001, Modification #1 dated 3/1/99.
Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Historical Dredging Equipment information.

	QUANTITY	UOM	TOTAL DIRECT	FOOH	HOOH	PROF	Misc Ta	BOND	TOTAL COST	UNIT COST
01 Snake River DMMS 99										
01.12 Navigation, Ports & Harbors										
01.12.06 Dredging Rivers										
01.12.06.01 Mechanical Dredging										
01.12.06.01.001- Mob. & Demob. Equipment										
01.12.06.01.001-_01AA Mob. & Demob. Excavation Dredges	1.00	JB	164,469	16,970	14,515	19,595	0	3,798	219,348	219348.09
TOTAL Mob. & Demob. Equipment	1.00	JB	164,469	16,970	14,515	19,595	0	3,798	219,348	219348.09
01.12.06.01.002- Dredge, Haul & Off-load Material										
01.12.06.01.002-_02BB Dredging, Haul Mat. to Disposal	41500.00	CY	126,575	13,060	11,171	15,081	0	2,923	168,810	4.07
TOTAL Dredge, Haul & Off-load Material	41500.00	CY	126,575	13,060	11,171	15,081	0	2,923	168,810	4.07
TOTAL Mechanical Dredging	1.00	EA	291,044	30,030	25,686	34,676	0	6,722	388,158	388157.92
TOTAL Dredging Rivers	1.00	EA	291,044	30,030	25,686	34,676	0	6,722	388,158	388157.92
TOTAL Navigation, Ports & Harbors	1.00	EA	291,044	30,030	25,686	34,676	0	6,722	388,158	388157.92
TOTAL Snake River DMMS 99	1.00	EA	291,044	30,030	25,686	34,676	0	6,722	388,158	388157.92
TOTAL Dredging 41.5K cy Confl. Inwater	1.00	EA	291,044	30,030	25,686	34,676	0	6,722	388,158	388157.92

No errors detected...

* * * END OF ERROR REPORT * * *

No Detailed Estimate...

No Backup Reports...

* * * END TABLE OF CONTENTS * * *

In-Water 5.a

Dredging 32K cy McNary Inwater
DMMS Dredging
of Snake & Clearwater Rivers,
McNary Pool
with Inwater Disposal

Designed By: Walla Walla District COE
Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch
Kim Callan, Chief

Preparation Date: 05/28/99
Effective Date of Pricing: 05/01/99
Est Construction Time: 60 Days

Sales Tax: 7.9%

LABOR ID: NWW99D EQUIP ID: NAT97C

Currency in DOLLARS

CREW ID: NAT99A UPB ID: UP99EA

Project Description:
The Columbia and Snake Rivers, McNary Pool dredging areas are assumed to extend throughout the vicinity of the Ice Harbor Cut Navigation Channel from Snake River Mile 3 to Snake River Mile 9, located upstream of the confluence of the Columbia and Snake Rivers. All material assumed to be disposed of between Columbia River Mile 314.5 and 316.5.

Basis of Design:
Planning level estimate produced utilizing the Cost Engineering Dredge Estimating Program (CEDEP)

Overtime:
Overtime is anticipated. The Government Estimate is based on 24 hour operation. Work shall be conducted on a 24 hr/day, 3-8 hour shifts/day, 7 days/week, considering 4 holidays.

Construction Windows:
Dredging operations will begin on 15 December, and shall not continue after 28 Feb, in any given year, due to the fish window requirements.

Sub Contracting Plan:
No Sub Contracting considered all work to be performed by Prime Contractor.

Site Access:
It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

Construction Methodology:
Common dredging methods using 10cy clamshell dredges, with the use of scows for in-water disposal.

Conditions:
This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

Equipment/Labor Availability & Distance Traveled:
Assume labor will be available within the project location. Equipment Mobilization will be from the Mouth of the Columbia River to Ice Harbor Lock and Dam, approximately 334 River Miles to allow contractors from Portland & Seattle to compete.

Environmental Concerns:
Turbidity monitoring will be required during the dredging operation. Sieve analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

Effective dates for:

Labor: General Decision Number WA990001, Modification #1 dated 3/1/99.
Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and
Historical Dredging Equipment information.

	QUANTITY	UOM	TOTAL DIRECT	FOOH	HOOH	PROF	Misc Ta	BOND	TOTAL COST	UNIT COST
01 Snake River DMMS 99										
01.01 Dredging Material Study										
01.01.12 Navigation, Ports & Harbors										
01.01.12.01 Mechanical Dredging										
01.01.12.01.001- Mob. & Demob. Equipment										
01.01.12.01.001-_01AA Mob. & Demob. Excavation Dredges	1.00	JB	129,182	18,241	11,794	15,922	0	3,229	178,368	178367.64
TOTAL Mob. & Demob. Equipment	1.00	JB	129,182	18,241	11,794	15,922	0	3,229	178,368	178367.64
01.01.12.01.002A Dredging Cost From CEDEP										
01.01.12.01.002A_02BB Dredging Cost From CEDEP	32000.00	CY	85,440	12,065	7,800	10,530	0	2,136	117,971	3.69
TOTAL Dredging Cost From CEDEP	32000.00	CY	85,440	12,065	7,800	10,530	0	2,136	117,971	3.69
TOTAL Mechanical Dredging	1.00	EA	214,622	30,306	19,594	26,452	0	5,365	296,339	296338.66
TOTAL Navigation, Ports & Harbors	1.00	EA	214,622	30,306	19,594	26,452	0	5,365	296,339	296338.66
TOTAL Dredging Material Study	1.00	EA	214,622	30,306	19,594	26,452	0	5,365	296,339	296338.66
TOTAL Snake River DMMS 99	1.00	EA	214,622	30,306	19,594	26,452	0	5,365	296,339	296338.66
TOTAL Dredging 32K cy McNary Inwater	1.00	EA	214,622	30,306	19,594	26,452	0	5,365	296,339	296338.66

No errors detected...

* * * END OF ERROR REPORT * * *

Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DMM32M: Dredging 32K cy McNary Inwater - DMMS Dredging
PLANNING ESTIMATE

No Detailed Estimate...

No Backup Reports...

* * * END TABLE OF CONTENTS * * *

In-Water 6.a

Dredging 2K cy Ice Harb Inwater
DMMS Dredging
of Snake River, Ice Harbor Pool
with Inwater Disposal

Designed By: Walla Walla District COE
Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch
Kim Callan, Chief

Preparation Date: 05/28/99
Effective Date of Pricing: 05/01/99
Est Construction Time: 60 Days

Sales Tax: 7.90%

LABOR ID: NWW99D EQUIP ID: NAT97C

Currency in DOLLARS

CREW ID: NAT99A UPB ID: UP99EA

Project Description:
The Snake River, Ice Harbor Pool dredging area is located downstream of Lower Monumental Dam. All material assumed to be disposed of between Snake River Mile 10 to Snake River Mile 23.

Basis of Design:
Planning level estimate produced utilizing the Cost Engineering Dredge Estimating Program (CEDEP)

Overtime:
Overtime is anticipated. The Government Estimate is based on a 24 hour operation. Work shall be conducted on a 24 hr/day, 3-8 hour shifts/day, 7 days/week, considering 4 holidays.

Construction Windows:
Dredging operations will begin on 15 December, and shall not continue after 28 Feb, in any given year, due to the fish window requirements.

Sub Contracting Plan:
No Sub Contracting considered all work to be performed by Prime Contractor.

Site Access:
It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

Construction Methodology:
Common dredging methods using 10cy clamshell dredges, with the use of scows for in-water disposal.

Conditions:
This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

Equipment/Labor Availability & Distance Traveled:
Assume labor will be available within the project location. Equipment Mobilization will be from the Mouth of the Columbia River to Lower Monumental Lock and Dam, approximately 365 River Miles to allow contractors from Portland & Seattle to compete.

Environmental Concerns:
Turbidity monitoring will be required during the dredging operation. Sieve analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

Effective dates for:
Labor: General Decision Number WA990001, Modification #1 dated 3/1/99.
Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and

Historical Dredging Equipment information.

	QUANTITY	UOM	TOTAL DIRECT	FOOH	HOOH	PROF	Misc Ta	BOND	TOTAL COST	UNIT COST
01 Snake River DMMS 99										
01.12 Navigation, Ports & Harbors										
01.12.06 Dredging Rivers										
01.12.06.01 Mechanical Dredging										
01.12.06.01.001- Mob. & Demob. Equipment										
01.12.06.01.001-_01AA Mob. & Demob. Excavation Dredges	1.00	JB	115,563	27,451	11,441	15,445	0	3,454	173,354	173354.40
TOTAL Mob. & Demob. Equipment	1.00	JB	115,563	27,451	11,441	15,445	0	3,454	173,354	173354.40
01.12.06.01.002- Dredge, Haul & Off-load Material										
01.12.06.01.002-_02BB Dredging, Haul Mat. to Disposal	2000.00	CY	12,020	2,855	1,190	1,607	0	359	18,031	9.02
TOTAL Dredge, Haul & Off-load Material	2000.00	CY	12,020	2,855	1,190	1,607	0	359	18,031	9.02
TOTAL Mechanical Dredging	1.00	EA	127,583	30,306	12,631	17,052	0	3,814	191,385	191385.43
TOTAL Dredging Rivers	1.00	EA	127,583	30,306	12,631	17,052	0	3,814	191,385	191385.43
TOTAL Navigation, Ports & Harbors	1.00	EA	127,583	30,306	12,631	17,052	0	3,814	191,385	191385.43
TOTAL Snake River DMMS 99	1.00	EA	127,583	30,306	12,631	17,052	0	3,814	191,385	191385.43
TOTAL Dredging 2K cy Ice Harb Inwater	1.00	EA	127,583	30,306	12,631	17,052	0	3,814	191,385	191385.43

Mon 14 Aug 2000
Eff. Date 05/01/99
ERROR REPORT

Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DMM2IH: Dredging 2K cy Ice Harb Inwater - DMMS Dredging
PLANNING ESTIMATE

TIME 12:11:05

No errors detected...

* * * END OF ERROR REPORT * * *

LABOR ID: NWW99D EQUIP ID: NAT97C

Currency in DOLLARS

CREW ID: NAT99A UPB ID: UP99EA

Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DMM2IH: Dredging 2K cy Ice Harb Inwater - DMMS Dredging
PLANNING ESTIMATE

No Detailed Estimate...

No Backup Reports...

* * * END TABLE OF CONTENTS * * *

In-Water 7.a

Dredging 2K cy LoMo Inwater
DMMS Dredging
of Snake River,
Lower Monumental Pool
with Inwater Disposal

Designed By: Walla Walla District COE
Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch
Kim Callan, Chief

Preparation Date: 05/28/99
Effective Date of Pricing: 05/01/99
Est Construction Time: 60 Days

Sales Tax: 7.90%

Currency in DOLLARS

LABOR ID: NWW99D EQUIP ID: NAT97C CREW ID: NAT99A UPB ID: UP99EA

Project Description:
The Snake River, Lower Monumental Pool dredging area is located downstream of Little Goose Dam and near the confluence of the Palouse and Snake River confluence. All material assumed to be disposed of between Snake River Mile 42 to Snake River Mile 47.

Basis of Design:
Planning level estimate produced utilizing the Cost Engineering Dredge Estimating Program (CEDEP)

Overtime:
Overtime is anticipated. The Government Estimate is based on a 24 hour operation. Work shall be conducted on a 24 hr/day, 3-8 hour shifts/day, 7 days/week, considering 4 holidays.

Construction Windows:
Dredging operations will begin on 15 December, and shall not continue after 28 Feb, in any given year, due to the fish window requirements.

Sub Contracting Plan:
No Sub Contracting considered all work to be performed by Prime Contractor.

Site Access:
It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

Construction Methodology:
Common dredging methods using 10cy clamshell dredges, with the use of scows for in-water disposal.

Conditions:
This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

Equipment/Labor Availability & Distance Traveled:
Assume labor will be available within the project location. Equipment Mobilization will be from the Mouth of the Columbia River to Little Goose Lock and Dam, approximately 394 River Miles to allow contractors from Portland & Seattle to compete.

Environmental Concerns:
Turbidity monitoring will be required during the dredging operation. Sieve analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

Effective dates for:
Labor: General Decision Number WA990001, Modification #1 dated 3/1/99.

Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Historical Dredging Equipment information.

		QUANTITY	UOM	TOTAL DIRECT	FOOH	HOOH	PROF	Misc Ta	BOND	TOTAL COST	UNIT COST
01 Snake River DMMS 99											
01.12 Navigation, Ports & Harbors											
01.12.06 Dredging Rivers											
01.12.06.01 Mechanical Dredging											
01.12.06.01.001- Mob. & Demob. Equipment											
01.12.06.01.001-_01AA	Mob. & Demob. Excavation Dredges	1.00	JB	146,272	27,825	13,928	18,802	0	4,021	210,848	210848.01
	TOTAL Mob. & Demob. Equipment	1.00	JB	146,272	27,825	13,928	18,802	0	4,021	210,848	210848.01
01.12.06.01.002- Dredge, Haul & Off-load Material											
01.12.06.01.002-_02BB	Dredging, Haul Mat. to Disposal	2000.00	CY	13,040	2,481	1,242	1,676	0	358	18,797	9.40
	TOTAL Dredge, Haul & Off-load Material	2000.00	CY	13,040	2,481	1,242	1,676	0	358	18,797	9.40
	TOTAL Mechanical Dredging	1.00	EA	159,312	30,306	15,169	20,479	0	4,379	229,645	229644.90
	TOTAL Dredging Rivers	1.00	EA	159,312	30,306	15,169	20,479	0	4,379	229,645	229644.90
	TOTAL Navigation, Ports & Harbors	1.00	EA	159,312	30,306	15,169	20,479	0	4,379	229,645	229644.90
	TOTAL Snake River DMMS 99	1.00	EA	159,312	30,306	15,169	20,479	0	4,379	229,645	229644.90
	TOTAL Dredging 2K cy LoMo Inwater	1.00	EA	159,312	30,306	15,169	20,479	0	4,379	229,645	229644.90

No errors detected...

* * * END OF ERROR REPORT * * *

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In-Water 8.a

Dredging 4K cy Goose Inwater
DMMS Dredging
of Snake River,
Little Goose Pool
with Inwater Disposal

Designed By: Walla Walla District COE
Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch
Kim Callan, Chief

Preparation Date: 05/28/99
Effective Date of Pricing: 05/01/99
Est Construction Time: 60 Days

Sales Tax: 7.90%

Project Description:
The Snake River, Little Goose Pool dredging area is located downstream of Lower Granite Dam and at Schultz Bar, located near Snake River Mile 100. All material assumed to be disposed of between Snake River Mile 71 to Snake River Mile 83.

Basis of Design:
Planning level estimate produced utilizing the Cost Engineering Dredge Estimating Program (CEDEP)

Overtime:
Overtime is anticipated. The Government Estimate is based on a 24 hour operation. Work shall be conducted on a 24 hr/day, 3-8 hour shifts/day, 7 days/week, considering 4 holidays.

Construction Windows:
Dredging operations will begin on 15 December, and shall not continue after 28 Feb, in any given year, due to the fish window requirements.

Sub Contracting Plan:
No Sub Contracting considered all work to be performed by Prime Contractor.

Site Access:
It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

Construction Methodology:
Common dredging methods using 10cy clamshell dredges, with the use of scows for in-water disposal.

Conditions:
This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

Equipment/Labor Availability & Distance Traveled:
Assume labor will be available within the project location. Equipment Mobilization will be from the Mouth of the Columbia River to Lower Granite Lock and Dam, approximately 431 River Miles to allow contractors from Portland & Seattle to compete.

Environmental Concerns:
Turbidity monitoring will be required during the dredging operation. Sieve analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

Effective dates for:
Labor: General Decision Number WA990001, Modification #1 dated 3/1/99.

Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Historical Dredging Equipment information.

	QUANTITY	UOM	TOTAL DIRECT	FOOH	HOOH	PROF	Misc Ta	BOND	TOTAL COST	UNIT COST
01 Snake River DMMS 99										
01.12 Navigation, Ports & Harbors										
01.12.06 Dredging Rivers										
01.12.06.01 Mechanical Dredging										
01.12.06.01.001- Mob. & Demob. Equipment										
01.12.06.01.001-_01AA Mob. & Demob. Excavation Dredges	1.00	JB	155,506	27,006	14,601	19,711	0	4,143	220,968	220967.88
TOTAL Mob. & Demob. Equipment	1.00	JB	155,506	27,006	14,601	19,711	0	4,143	220,968	220967.88
01.12.06.01.002- Dredge, Haul & Off-load Material										
01.12.06.01.002-_02BB Dredging, Haul Mat. to Disposal	4000.00	CY	19,000	3,300	1,784	2,408	0	506	26,998	6.75
TOTAL Dredge, Haul & Off-load Material	4000.00	CY	19,000	3,300	1,784	2,408	0	506	26,998	6.75
TOTAL Mechanical Dredging	1.00	EA	174,506	30,306	16,385	22,120	0	4,650	247,966	247966.13
TOTAL Dredging Rivers	1.00	EA	174,506	30,306	16,385	22,120	0	4,650	247,966	247966.13
TOTAL Navigation, Ports & Harbors	1.00	EA	174,506	30,306	16,385	22,120	0	4,650	247,966	247966.13
TOTAL Snake River DMMS 99	1.00	EA	174,506	30,306	16,385	22,120	0	4,650	247,966	247966.13
TOTAL Dredging 4K cy Goose Inwater	1.00	EA	174,506	30,306	16,385	22,120	0	4,650	247,966	247966.13

No errors detected...

* * * END OF ERROR REPORT * * *

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* * * END TABLE OF CONTENTS * * *

Upland Summary

	Description	Years	Estimated Quantity	U/M	Total $ Costs Each Year of Dredging
Item 1 - Confluence Dredging Snake & Clearwater Rivers					
Item 1.a	Initial Construction of Chief Timothy Transfer Site and Page Creek Upland disposal Site, template dredge operation, and upland disposal at Chief Timothy	1	2,000,000	cy	**$12,313,000**
Item 1.b	Initial Construction of Chief Timothy Transfer Site RCC Cap, template dredge operation, and upland disposal at Page Creek	2	2,000,000	cy	**$21,095,000**
Item 1.c	Template dredge operation and upland disposal at Page Creek	3-20	2,000,000	cy	**$20,232,000**
Item 1.d	Template maintenance dredge operation and upland disposal at Page Creek	21-end	725,000	cy	**$8,309,000**
Item 2 - Confluence Dredging Snake & Clearwater Rivers					
Item 2.a	Initial Construction of Chief Timothy Transfer Site and Page Creek Upland Disposal Site, template dredge operation, and upland disposal at Chief Timothy	1	1,000,000	cy	**$8,798,000**
Item 2.b	Template dredge operation and upland disposal at Chief Timothy	2	1,000,000	cy	**$3,896,000**
Item 2.c	Initial Construction of Chief Timothy Transfer Site RCC Cap, template dredge operation, and upland disposal at Page Creek	3	1,000,000	cy	**$11,170,000**
Item 2.d	Template dredge operation and upland disposal at Page Creek	4-10	1,000,000	cy	**$10,307,000**
Item 2.e	Template maintenance dredge operation and upland disposal at Page Creek	11-end	325,000	cy	**$5,737,000**
Item 3 - Confluence Dredging Snake & Clearwater Rivers					
Item 3.a	Initial Construction Jose Upland Disposal Site, template dredge operation, and upland disposal at Joso	1	300,000	cy	**$9,738,000**
Item 3.b	Template dredge operation and upland disposal at Joso	2-20	300,000	cy	**$4,824,000**
Item 3.c	Initial Construction of Chief Timothy Transfer Site, template dredge operation, and upland disposal at Chief Timothy	21	300,000	cy	**$5,831,000**
Item 3.d	Template dredge operation and upland disposal at Chief Timothy	22-26	300,000	cy	**$1,682,000**
Item 3.e	Initial Construction of Page Creek Upland Disposal Site, template dredge operation, and disposal at Chief Timothy	27	300,000	cy	**$2,435,000**

Item 3.f	Initial Construction of Chief Timothy Transfer Site RCC Cap, template dredge operation, and upland disposal at Page Creek	28	300,000	cy	**$4,480,000**
Item 3.g	Template dredge operation and upland disposal at Page Creek	29-end	300,000	cy	**$3,617,000**
Item 4 - Confluence Dredging Snake & Clearwater Rivers					
Item 4.a	Initial Construction Jose Upland Disposal Site, template maintenance dredge operation, and upland disposal at Joso	5	41,500	cy	**$3,199,000**
Item 4.b	Template maintenance dredge operation and upland disposal at Joso	10	41,500	cy	**$1,000,000**
Item 4.c	Template maintenance dredge operation and upland disposal at Joso	20	41,500	cy	**$1,000,000**
Item 4.d	Template maintenance dredge operation and upland disposal at Joso	10-yr intervals - end	41,500	cy	**$1,000,000**
Item 5 - Dredging McNary Pool					
Item 5.a	Initial Construction Jose Upland Disposal Site, template maintenance dredge operation, and upland disposal at Joso	1	32,000	cy	**$2,882,000**
Item 5.b	Template maintenance dredge operation and upland disposal at Joso	2-end at 2-yr intervals	32,000	cy	**$683,000**
Item 6 - Dredging Ice Harbor Pool					
Item 6.a	Template maintenance dredge operation and upland disposal at Joso	1-end at 2-yr intervals	2,000	cy	**$204,000**
Item 7 - Dredging Lower Monumental Pool					
Item 7.a	Template maintenance dredge operation and upland disposal at Joso	1-end at 2-yr intervals	2,000	cy	**$208,000**
Item 8 - Dredging Little Goose Pool					
Item 8.a	Template maintenance dredge operation and upland disposal at Joso	1-end at 2-yr intervals	4,000	cy	**$244,000**

Item 9 - Dredging contaminated material

Item 9.a	Initial Construction Joso Contingency Upland Disposal Site, template maintenance dredge operation, and upland disposal at Joso	Initial	7,000	cy	**$11,613,000**
Item 9.b	Template maintenance dredge operation and upland disposal at Joso	Subsequent Operations	7,000	cy	**$230,000**

Note: Total Costs include Overhead and Profit.
Escalation and contingencies are not included.
Item #1 2,000,000 cy option requires a significant amount of Dredging Plant to complete project within construction window. From Historical information this is a high risk option. Dependent on Contractor ability to provide equipment which could effect cost.

Points of Contact:
Lead Estimator - Karl Pankaskie (509)527-7517
Estimator - Julie Davin (509)527-7514

Upland 1 Proration

'PRORATING OF COST Lower Granite Pool 2,000,000 CY Annually

Years	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08
2,000,000 cy @ Chief Timothy								
Mechanical Dredging, River to Transfer Site (Chief Timothy)								
Costs	$7,410,624	$7,410,624	$7,410,624	$7,410,624	$7,410,624	$7,410,624	$7,410,624	$7,410,624
Disposal (Page Creek)/Transfer (Chief Timothy) Site Development								
Costs	$4,901,992	$863,181	$0	$0	$0	$0	$0	$0
Transfer Material to Disposal Site (Page Creek) from Transfer Site (Chief Timothy)								
Costs		$12,820,859	$12,820,859	$12,820,859	$12,820,859	$12,820,859	$12,820,859	$12,820,859
725,000 cy @ Chief Timothy								
Mechanical Dredging, River to Transfer Site (Chief Timothy)								
Costs								
Transfer Material to Disposal Site (Page Creek) from Transfer Site (Chief Timothy)								
Costs	$0	0	0	0	0	0	0	0
	$0	$0	$0	$0	$0	$0	$0	$0
Construction Subtotal	$4,901,992	$863,181	$0	$0	$0	$0	$0	$0
O,M,R,R,R Subtotal	$7,410,624	$20,231,483	$20,231,483	$20,231,483	$20,231,483	$20,231,483	$20,231,483	$20,231,483
	0							
	$0	$0	$0	$0	$0	$0	$0	$0
Totals *$0.00*	$12,312,616	$21,094,664	$20,231,483	$20,231,483	$20,231,483	$20,231,483	$20,231,483	$20,231,483

Years	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08

FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18
$7,410,624	$7,410,624	$7,410,624	$7,410,624	$7,410,624	$7,410,624	$7,410,624	$7,410,624	$7,410,624	$7,410,624
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$12,820,859	$12,820,859	$12,820,859	$12,820,859	$12,820,859	$12,820,859	$12,820,859	$12,820,859	$12,820,859	$12,820,859
0	0	0	0	0	0	0	0	0	0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$20,231,483	$20,231,483	$20,231,483	$20,231,483	$20,231,483	$20,231,483	$20,231,483	$20,231,483	$20,231,483	$20,231,483
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$20,231,483	$20,231,483	$20,231,483	$20,231,483	$20,231,483	$20,231,483	$20,231,483	$20,231,483	$20,231,483	$20,231,483

FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18

FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
$7,410,624	$7,410,624								
$0	$0								
$12,820,859	$12,820,859	$0	$0	$0	$0	$0	$0	$0	$0
		$3,635,907	$3,635,907	$3,635,907	$3,635,907	$3,635,907	$3,635,907	$3,635,907	$3,635,907
0	0	$4,672,205	$4,672,205	$4,672,205	$4,672,205	$4,672,205	$4,672,205	$4,672,205	$4,672,205
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$20,231,483	$20,231,483	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$20,231,483	$20,231,483	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112

FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28

FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37	FY38	FY39
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$3,635,907	$3,635,907	$3,635,907	$3,635,907	$3,635,907	$3,635,907	$3,635,907	$3,635,907	$3,635,907	$3,635,907	$3,635,907
$4,672,205	$4,672,205	$4,672,205	$4,672,205	$4,672,205	$4,672,205	$4,672,205	$4,672,205	$4,672,205	$4,672,205	$4,672,205
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112

| FY29 | FY30 | FY31 | FY32 | FY33 | FY34 | FY35 | FY36 | FY37 | FY38 | FY39 |

FY40	FY41	FY42	FY43	FY44	FY45	FY46	FY47	FY48	FY49	FY50
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$3,635,907	$3,635,907	$3,635,907	$3,635,907	$3,635,907	$3,635,907	$3,635,907	$3,635,907	$3,635,907	$3,635,907	$3,635,907
$4,672,205	$4,672,205	$4,672,205	$4,672,205	$4,672,205	$4,672,205	$4,672,205	$4,672,205	$4,672,205	$4,672,205	$4,672,205
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112

FY40	FY41	FY42	FY43	FY44	FY45	FY46	FY47	FY48	FY49	FY50

FY51	FY52	FY53	FY54	FY55	FY56	FY57	FY58	FY59	FY60	FY61
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$3,635,907	$3,635,907	$3,635,907	$3,635,907	$3,635,907	$3,635,907	$3,635,907	$3,635,907	$3,635,907	$3,635,907	$3,635,907
$4,672,205	$4,672,205	$4,672,205	$4,672,205	$4,672,205	$4,672,205	$4,672,205	$4,672,205	$4,672,205	$4,672,205	$4,672,205
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112

FY51	FY52	FY53	FY54	FY55	FY56	FY57	FY58	FY59	FY60	FY61

FY62	FY63	FY64	FY65	FY66	FY67	FY68	FY69	FY70	FY71	FY72
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$3,635,907	$3,635,907	$3,635,907	$3,635,907	$3,635,907	$3,635,907	$3,635,907	$3,635,907	$3,635,907	$3,635,907	$3,635,907
$4,672,205	$4,672,205	$4,672,205	$4,672,205	$4,672,205	$4,672,205	$4,672,205	$4,672,205	$4,672,205	$4,672,205	$4,672,205
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112	$8,308,112

FY62	FY63	FY64	FY65	FY66	FY67	FY68	FY69	FY70	FY71	FY72

FY73	FY74	Subtotal 74 Years
		$0
		$148,212,480
		$5,765,173
$0	$0	$243,596,321
$3,635,907	$3,635,907	$196,338,978
$4,672,205	$4,672,205	$252,299,070
$0	$0	$0
$0	$0	$5,765,173
$8,308,112	$8,308,112	$840,446,849
$0	$0	
$8,308,112	$8,308,112	$846,212,022
FY73	FY74	74 Years

Upland 1.a.b.c

Dredging 2-M CuY Confl. Upland D
DMMS Dredging
of Snake & Clearwater Rivers
with Upland Disposal

Designed By: Walla Walla District COE
Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch
Kim Callan, Chief

Preparation Date: 05/28/99
Effective Date of Pricing: 05/01/99
Est Construction Time: 60 Days

Sales Tax: 7.90%

Project Description:
The Snake River dredging areas are assumed to extend from the vicinity of Silcott Island near Snake River Mile 131 upstream to the State Highway 12 bridge upstream of the confluence of the Snake and Clearwater Rivers, located near Snake River Mile 139.5. The Clearwater River dredging areas are assumed to extend from the Snake River confluence upstream to the Port of Lewiston, from Clearwater River Mile 0.00 to Clearwater River Mile 1.66.
All material assumed to be disposed of utilizing a transfer station near Snake River Mile 131, located near the Mouth of Alpowa Creek where the material will be temporarily stored. The material will be rehandled from the Transfer Station to the final Disposal Area at the Page Creek - East Side Site. The disposal site is assumed adequate to contain all materials dredged.

Basis of Design:
Planning level estimate produced utilizing the MICRO Computer Aided Cost Estimating System (MCACES) and Cost Engineering Dredge Estimating Program (CEDEP)

Overtime:
Overtime is anticipated. The Government Estimate is based on a 24 hour operation. Work shall be conducted on a 24 hr/day, 3-8 hour shifts/day, 7 days/week, considering 4 holidays.

Construction Windows:
Dredging operations will begin on 15 December, and shall not continue after 28 Feb, in any given year, due to the fish window requirements. Construction of the Transfer Station and the Disposal Area will occur during year one.

Sub Contracting Plan:
No Sub Contracting considered all work to be performed by Prime Contractor.

Site Access:
It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

Construction Methodology:
Common dredging methods using 15cy clamshell dredges, with the use of scows for in-water disposal. The Transfer Station and the Disposal Area will be constructed during the first year. The first years dredging material will be used for development of the Transfer Station. After year one the dredging material will be offloaded from the barges on to the Transfer Site where the material will be allowed to dewater. The material may be moved from the Transfer Station to the final Disposal area throughout the remainder of the year.

Conditions:
This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than

normal winter work weather has been assumed.

Equipment/Labor Availability & Distance Traveled:
Assume labor will be available within the project location. Dredging Plant Equipment Mobilization will be from the Mouth of the Columbia River to the Confluence of the Snake and Clearwater Rivers, approximately 463 River Miles to allow contractors from Portland & Seattle to compete. All equipment is considered owned - no rental equipment considered. All equipment other than dredging plant rates were computed based on the EP 1110-1-8. All equipment other than Dredging Plant mob and demob costs computed as 5% of the direct costs.

Environmental Concerns:
Turbidity monitoring will be required during the dredging operation. Sieve analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

Contingencies:
Total costs include Overhead and Profit. Escalation and contingencies are not included.

Effective dates for:
Labor: General Decision Number WA990001, Modification #1 dated 3/1/99.
Equipment: Cost Engineering Dredge Estimating Programs (CEDEP), Historical Dredging Equipment information, and EP 1110-1-8.

	QUANTITY	UOM	TOTAL DIRECT	FOOH	HOOH	PROF	Misc Ta	BOND	TOTAL COST	UNIT COST
01 SNAKE RIVER DMMS 99										
01.12 NAVIGATION, PORTS & HARBORS										
01.12.06 DREDGING RIVERS										
01.12.06.01 MECH DREDGING, RIVER TO TRANSFER										
01.12.06.01.001- MOB. & DEMOB. AND PREWORK										
01.12.06.01.001-_01AA Mob. & Demob. Excavation Dredges	1.00	JB	276,938	27,694	15,232	27,988	0	3,015	350,866	350866.39
TOTAL MOB. & DEMOB. AND PREWORK	1.00	JB	276,938	27,694	15,232	27,988	0	3,015	350,866	350866.39
01.12.06.01.002- DREDGE, HAUL & OFF-LOAD MATERIAL										
01.12.06.01.002-_02BB Dredging & Haul Mat to Disposal	2000000	CY	3,700,000	370,000	203,500	373,931	0	40,281	4,687,712	2.34
01.12.06.01.002-_02EB Offloading Barge, with Clamshell	2000000	CY	1,377,339	137,734	75,754	139,197	0	14,995	1,745,019	0.87
01.12.06.01.002-_02EF Push Mat to Dry Area, by Dozer	2000000	CY	494,910	49,491	27,220	50,017	0	5,388	627,026	0.31
TOTAL DREDGE, HAUL & OFF-LOAD MATERIAL	2000000	CY	5,572,249	557,225	306,474	563,145	0	60,664	7,059,757	3.53
TOTAL MECH DREDGING, RIVER TO TRANSFER	2000000	CY	5,849,187	584,919	321,705	591,134	0	63,679	7,410,624	3.71
01.12.06.02 TRANSFER MATERIAL TO DISPOSAL										
01.12.06.02.001- HAUL MAT. TO DISPOSAL SITE										
01.12.06.02.001-_02AC Load, Haul, Spread in Disposal S	2000000	BCY	9,684,899	1,452,735	556,882	906,325	0	97,753	12,698,594	6.35
TOTAL HAUL MAT. TO DISPOSAL SITE	2000000	CY	9,684,899	1,452,735	556,882	906,325	0	97,753	12,698,594	6.35
01.12.06.02.002- RESTORATION OF SITES										
01.12.06.02.002-_02AA Upland Site, Hydro Seeding	12.00	AC	22,800	3,420	1,311	2,134	0	230	29,895	2491.23
01.12.06.02.002-_02AC Upland Site, Top Soil, L,H,S	9100.00	BCY	23,824	3,574	1,370	2,229	0	240	31,238	3.43
01.12.06.02.002-_02BA Transfer Site, Hydro Seeding	12.00	AC	22,800	3,420	1,311	2,134	0	230	29,895	2491.23
01.12.06.02.002-_02BC Transfer Site, Top Soil, L,H,S	9100.00	BCY	23,824	3,574	1,370	2,229	0	240	31,238	3.43
TOTAL RESTORATION OF SITES	24.00	AC	93,248	13,987	5,362	8,726	0	941	122,265	5094.37
TOTAL TRANSFER MATERIAL TO DISPOSAL	2000000	CY	9,778,148	1,466,722	562,243	915,051	0	98,694	12,820,859	6.41
01.12.06.03 DISPOSAL/TRANSFER REV, CHIEF TIM										
01.12.06.03.001- TRANS,RIVER DIKE & SP BARGE SLIP										

		QUANTITY	UOM	TOTAL DIRECT	FOOH	HOOH	PROF	Misc Ta	BOND	TOTAL COST	UNIT COST
01.12.06.03.001-_02AA	T-RS Berm, Earth Fill, L,H,D,&C	40000.00	BCY	193,105	28,966	11,104	20,403	0	2,411	255,988	6.40
01.12.06.03.001-_02AB	T-RS Barge Tie-off, Sheet Piling	52000.00	SF	1,006,485	150,973	57,873	106,341	0	12,566	1,334,239	25.66
01.12.06.03.001-_02DB	T-RS Barge Tie-off,(Wood pole)	576.00	LF	22,883	3,432	1,316	2,418	0	286	30,334	52.66
01.12.06.03.001-_03AB	T-Barge Tie-off,Piling Anchr-Blk	780.00	CY	167,151	25,073	9,611	17,661	0	2,087	221,583	284.08
	TOTAL TRANS,RIVER DIKE & SP BARGE SLIP	2600.00	LF	1,389,624	208,444	79,903	146,822	0	17,350	1,842,144	708.52
01.12.06.03.002-	TRANSFER DIKE, (LAND SIDE)										
01.12.06.03.002-_02AA	T-Berm, Earth Fill, L,H,D,&C	56260.00	BCY	272,548	40,882	15,672	28,796	0	3,403	361,301	6.42
01.12.06.03.002-_02BA	T-Berm, Earth Fill, Geotextile	12250.00	SY	36,517	5,478	2,100	3,858	0	456	48,408	3.95
01.12.06.03.002-_02KK	T-Berm, Fence Galv	5300.00	LF	39,201	5,880	2,254	4,142	0	489	51,967	9.81
01.12.06.03.002-_02RE	T-Berm,R-Prot,RipRap Beddg,6"Thk	520.00	CY	6,780	1,017	390	716	0	85	8,987	17.28
01.12.06.03.002-_02RR	T-Berm,R-Prot,RipRap Rock 2'Thk	2075.00	CY	76,339	11,451	4,390	8,066	0	953	101,198	48.77
01.12.06.03.002-_02TA	T-Berm, Seeding Earth Fill	2.50	ACR	4,750	713	273	502	0	59	6,297	2518.72
	TOTAL TRANSFER DIKE, (LAND SIDE)	5150.00	LF	436,135	65,420	25,078	46,080	0	5,445	578,159	112.26
01.12.06.03.003-	TRANS,SETTLEMENTATION PONDS,4 EA										
01.12.06.03.003-_02AA	T-Berm,Earth Fill,Settling Pond	2800.00	BCY	13,265	1,990	763	1,402	0	166	17,584	6.28
01.12.06.03.003-_02KA	T-Berm,Earth Fill,Detentin Pond	26000.00	BCY	126,826	19,024	7,293	13,400	0	1,583	168,126	6.47
01.12.06.03.003-_03AA	T-Berm,S&D Pond,Overflow ConcStr	8.00	EA	50,724	7,609	2,917	5,359	0	633	67,242	8405.24
01.12.06.03.003-_03MA	T-Berm,S&D Pond,Pump Col ConcStr	4.00	EA	20,989	3,148	1,207	2,218	0	262	27,824	6955.97
01.12.06.03.003-_03OA	T-Berm, S&D Pond, Pumps Pads	4.00	EA	19,883	2,982	1,143	2,101	0	248	26,358	6589.41
	TOTAL TRANS,SETTLEMENTATION PONDS,4 EA	1.00	SF	231,687	34,753	13,322	24,479	0	2,893	307,134	307134.05
01.12.06.03.004-	TRANS(BRIDGE)CRANE RAIL,UNL BARG										
01.12.06.03.004-_02BA	T-BCR Set &Drive H-12x84 Columns	8400.00	LF	256,245	38,437	14,734	27,074	0	3,199	339,689	40.44
01.12.06.03.004-_03AA	T-BCR Elevated Concrete Beams	1640.00	CY	675,293	101,294	38,829	71,349	0	8,431	895,196	545.85
01.12.06.03.004-_05AA	T-BCR Crane Rails -Bridge Crane	4200.00	LF	140,877	21,131	8,100	14,884	0	1,759	186,752	44.46
01.12.06.03.004-_13AA	Purchased Crane Cost in Eq Rates	2.00	EA	0	0	0	0	0	0	0	0.01
	TOTAL TRANS(BRIDGE)CRANE RAIL,UNL BARG	2100.00	LF	1,072,414	160,862	61,664	113,307	0	13,389	1,421,637	676.97
01.12.06.03.005-	BRIDGE FOR HIGHWAY CROSSING										
01.12.06.03.005-_02AA	Ramps, Earthern Fill, L,H,D,&C	18600.00	BCY	88,972	13,346	5,116	9,401	0	1,111	117,946	6.34
01.12.06.03.005-_02AC	Ramps, Earthern Fill, Prep	560.00	BCY	1,253	188	72	132	0	16	1,661	2.97
01.12.06.03.005-_02BB	Ramps, Compt Gravel Fill, 6" Thk	560.00	CY	7,301	1,095	420	771	0	91	9,679	17.28
01.12.06.03.005-_03KP	Bridge & Abuts, Concr 30'W 46'L	1260.00	SF	126,000	18,900	7,245	13,313	0	1,573	167,031	132.56
	TOTAL BRIDGE FOR HIGHWAY CROSSING	1050.00	LF	223,526	33,529	12,853	23,617	0	2,791	296,316	282.21

		QUANTITY	UOM	TOTAL DIRECT	FOOH	HOOH	PROF	Misc Ta	BOND	TOTAL COST	UNIT COST
01.12.06.03.006-	UPLAND DISPOSAL HAUL ROAD										
01.12.06.03.006-_02AA	Access Road, Clear & Grub	10.00	ACR	12,788	1,918	735	1,351	0	160	16,952	1695.21
01.12.06.03.006-_02AC	Access Road, Cut & Fill - L,H,S	75000.00	BCY	198,747	29,812	11,428	20,999	0	2,481	263,468	3.51
01.12.06.03.006-_02AE	Access Road, Earthern Fill, Prep	3100.00	BCY	6,935	1,040	399	733	0	87	9,193	2.97
01.12.06.03.006-_02BB	Access Road, Gravel Fill, 6"Thk	3100.00	CY	40,417	6,063	2,324	4,270	0	505	53,578	17.28
01.12.06.03.006-_02EA	Access Road, Culvert 18"Dia 10Ea	500.00	LF	11,324	1,699	651	1,197	0	141	15,012	30.02
01.12.06.03.006-_02EC	Access Road, Ditches	7700.00	LF	14,214	2,132	817	1,502	0	177	18,843	2.45
01.12.06.03.006-_02TA	Access Road, Seeding	5.00	ACR	9,500	1,425	546	1,004	0	119	12,594	2518.72
	TOTAL UPLAND DISPOSAL HAUL ROAD	7000.00	LF	293,925	44,089	16,901	31,055	0	3,670	389,640	55.66
01.12.06.03.007-	UPLAND DISPOSAL SITE DEVELOPMENT										
01.12.06.03.007-_02AA	D-Containment Berm, Dike	2700.00	CY	6,864	1,030	395	725	0	86	9,099	3.37
01.12.06.03.007-_02BA	D-Containment Berm, Geotextile	6800.00	SY	20,271	3,041	1,166	2,142	0	253	26,872	3.95
01.12.06.03.007-_02EA	D-Containment Berm,Culvert12"Dia	280.00	LF	4,762	714	274	503	0	59	6,313	22.55
01.12.06.03.007-_02EC	D-Containment Berm,Culvert18"Dia	500.00	LF	11,324	1,699	651	1,197	0	141	15,012	30.02
01.12.06.03.007-_02SA	D-Containment Berm, Top Soil	1000.00	CY	2,542	381	146	269	0	32	3,370	3.37
01.12.06.03.007-_02TA	D-Containment Berm, Seeding	2.50	ACR	4,750	713	273	502	0	59	6,297	2518.72
	TOTAL UPLAND DISPOSAL SITE DEVELOPMENT	2000000	CY	50,513	7,577	2,905	5,337	0	631	66,963	0.03
	TOTAL DISPOSAL/TRANSFER DEV, CHIEF TIM	2000000	CY	3,697,826	554,674	212,625	390,698	0	46,169	4,901,992	2.45
01.12.06.99	DISPOSAL/TRANSFER CAP, CHIEF TIM										
01.12.06.99.001-	RCC COMPACTED CONCRETE CAP										
01.12.06.99.001-_02AB	RCC Prep, Grade and Compact Site	272997.00	SF	18,073	2,711	1,039	1,910	0	335	24,068	0.09
01.12.06.99.001-_02BB	RCC Compacted Gravel Fill, 6"Thk	5056.00	CY	65,924	9,889	3,791	6,965	0	1,222	87,790	17.36
01.12.06.99.001-_03BB	RCC Compacted Concrete, 1' Thick	10111.00	CY	564,189	84,628	32,441	59,610	0	10,455	751,323	74.31
	TOTAL RCC COMPACTED CONCRETE CAP	10111.00	CY	648,186	97,228	37,271	68,485	0	12,012	863,181	85.37
	TOTAL DISPOSAL/TRANSFER CAP, CHIEF TIM	272997.00	SF	648,186	97,228	37,271	68,485	0	12,012	863,181	3.16
	TOTAL DREDGING RIVERS	2000000	CY	19,973,347	2,703,543	1,133,844	1,965,368	0	220,553	25,996,655	13.00
	TOTAL NAVIGATION, PORTS & HARBORS			19,973,347	2,703,543	1,133,844	1,965,368	0	220,553	25,996,655	
	TOTAL SNAKE RIVER DMMS 99			19,973,347	2,703,543	1,133,844	1,965,368	0	220,553	25,996,655	
	TOTAL Dredging 2-M CuY Confl. Upland D			19,973,347	2,703,543	1,133,844	1,965,368	0	220,553	25,996,655	

No errors detected...

* * * END OF ERROR REPORT * * *

No Detailed Estimate...

No Backup Reports...

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Upland 1.d

Dredging 725tCuY Confl. Upland D
DMMS Dredging
of Snake & Clearwater Rivers
with Upland Disposal

Designed By: Walla Walla District COE
Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch
Kim Callan, Chief

Preparation Date: 05/28/99
Effective Date of Pricing: 05/01/99
Est Construction Time: 60 Days

Sales Tax: 7.90%

Project Description:
The Snake River dredging areas are assumed to extend from the vicinity of Silcott Island near Snake River Mile 131 upstream to the State Highway 12 bridge upstream of the confluence of the Snake and Clearwater Rivers, located near Snake River Mile 139.5. The Clearwater River dredging areas are assumed to extend from the Snake River confluence upstream to the Port of Lewiston, from Clearwater River Mile 0.00 to Clearwater River Mile 1.66.
All material assumed to be disposed of utilizing a transfer station near Snake River Mile 131, located near the Mouth of Alpowa Creek where the material will be temporarily stored. The material will be rehandled from the Transfer Station to the final Disposal Area at the Page Creek - East Side Site. The disposal site is assumed adequate to contain all materials dredged.

Basis of Design:
Planning level estimate produced utilizing the MICRO Computer Aided Cost Estimating System (MCACES) and Cost Engineering Dredge Estimating Program (CEDEP)

Overtime:
Overtime is anticipated. The Government Estimate is based on a 24 hour operation. Work shall be conducted on a 24 hr/day, 3-8 hour shifts/day, 7 days/week, considering 4 holidays.

Construction Windows:
Dredging operations will begin on 15 December, and shall not continue after 28 Feb, in any given year, due to the fish window requirements.

Sub Contracting Plan:
No Sub Contracting considered all work to be performed by Prime Contractor.

Site Access:
It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

Construction Methodology:
Common dredging methods using 15cy clamshell dredges, with the use of scows for in-water disposal. The dredging material will be offloaded from the barges on to the transfer site where the material will be allowed to dewater. The material may be moved from the Transfer Station to the final Disposal Area throughout the remainder of the year.

Conditions:
This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

Equipment/Labor Availability & Distance Traveled:
Assume labor will be available within the project location. Equipment

Mobilization will be from the Mouth of the Columbia River to the Confluence of the Snake and Clearwater Rivers, approximately 463 River Miles to allow contractors from Portland & Seattle to compete. All equipment is considered owned - no rental equipment considered. All equipment other than dredging plant rates were computed based on the EP 1110-1-8. All equipment other than Dredging Plant mob and demob costs computed as 5% of the direct costs.

Environmental Concerns:
Turbidity monitoring will be required during the dredging operation. Sieve analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

Contingencies:
Total costs included Overhead and Profit. Escalation and contingencies are not included.

Effective dates for:
Labor: General Decision Number WA990001, Modification #1 dated 3/1/99.
Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Historical Dredging Equipment information.

	QUANTITY	UOM	TOTAL DIRECT	FOOH	HOOH	PROF	Misc Ta	BOND	TOTAL COST	UNIT COST
01 SNAKE RIVER DMMS 99										
01.12 NAVIGATION, PORTS & HARBORS										
01.12.06 DREDGING RIVERS										
01.12.06.01 MECH DREDGING, RIVER TO TRANSFER										
01.12.06.01.001- MOB. & DEMOB. AND PREWORK										
01.12.06.01.001-_01AA Mob. & Demob. Excavation Dredges	1.00	JB	249,956	24,996	13,748	25,261	0	3,205	317,166	317165.57
TOTAL MOB. & DEMOB. AND PREWORK	1.00	JB	249,956	24,996	13,748	25,261	0	3,205	317,166	317165.57
01.12.06.01.002- DREDGE, HAUL & OFF-LOAD MATERIAL										
01.12.06.01.002-_02BB Dredging & Haul Mat to Disposal	725000.00	CY	1,906,750	190,675	104,871	192,701	0	24,450	2,419,448	3.34
01.12.06.01.002-_02EB Offloading Barge, with Clamshell	725000.00	CY	521,382	52,138	28,676	52,692	0	6,686	661,573	0.91
01.12.06.01.002-_02EF Push Mat to Dry Area, by Dozer	725000.00	CY	187,346	18,735	10,304	18,934	0	2,402	237,720	0.33
TOTAL DREDGE, HAUL & OFF-LOAD MATERIAL	725000.00	CY	2,615,477	261,548	143,851	264,327	0	33,539	3,318,741	4.58
TOTAL MECH DREDGING, RIVER TO TRANSFER	725000.00	CY	2,865,433	286,543	157,599	289,588	0	36,744	3,635,907	5.02
01.12.06.02 TRANSFER MATERIAL TO DISPOSAL										
01.12.06.02.001- HAUL MAT. TO DISPOSAL SITE										
01.12.06.02.001-_02AC Load, Haul, Spread in Disposal S	725000.00	BCY	3,510,963	526,644	201,880	328,560	0	43,885	4,611,933	6.36
TOTAL HAUL MAT. TO DISPOSAL SITE	725000.00	CY	3,510,963	526,644	201,880	328,560	0	43,885	4,611,933	6.36
01.12.06.02.002- RESTORATION OF SITES										
01.12.06.02.002-_02AA Upland Site, Hydro Seeding	5.00	AC	9,500	1,425	546	889	0	119	12,479	2495.80
01.12.06.02.002-_02AC Upland Site, Top Soil, L,H,S	4833.00	BCY	13,442	2,016	773	1,258	0	168	17,657	3.65
01.12.06.02.002-_02BA Transfer Site, Hydro Seeding	5.00	AC	9,500	1,425	546	889	0	119	12,479	2495.80
01.12.06.02.002-_02BC Transfer Site, Top Soil, L,H,S	4833.00	BCY	13,442	2,016	773	1,258	0	168	17,657	3.65
TOTAL RESTORATION OF SITES	10.00	AC	45,884	6,883	2,638	4,294	0	574	60,272	6027.22
TOTAL TRANSFER MATERIAL TO DISPOSAL	725000.00	CY	3,556,847	533,527	204,519	332,854	0	44,458	4,672,205	6.44
TOTAL DREDGING RIVERS	725000.00	CY	6,422,280	820,070	362,118	622,442	0	81,202	8,308,112	11.46
TOTAL NAVIGATION, PORTS & HARBORS			6,422,280	820,070	362,118	622,442	0	81,202	8,308,112	

LABOR ID: NAT99A EQUIP ID: NAT97C Currency in DOLLARS CREW ID: NAT99A UPB ID: UP99EA

	QUANTITY UOM	TOTAL DIRECT	FOOH	HOOH	PROF	Misc Ta	BOND	TOTAL COST	UNIT COST
TOTAL SNAKE RIVER DMMS 99		6,422,280	820,070	362,118	622,442	0	81,202	8,308,112	
TOTAL Dredging 725tCuY Confl. Upland D		6,422,280	820,070	362,118	622,442	0	81,202	8,308,112	

No errors detected...

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Upland 2 Proration

'PRORATING OF COST Lower Granite Pool 1,000,000 CY Annually

Years	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
1,000,000 cy @ Chief Timothy									
Mechanical Dredging, River to Transfer Site (Chief Timothy)									
Costs	$3,895,990	$3,895,990	$3,895,990	$3,895,990	$3,895,990	$3,895,990	$3,895,990	$3,895,990	$3,895,990
Disposal (Page Creek)/Transfer (Chief Timothy) Site Development									
Costs	$4,901,992	$0	$863,181	$0	$0	$0	$0	$0	$0
Transfer Material to Disposal Site (Page Creek) from Transfer Site (Chief Timothy)									
Costs			$6,410,382	$6,410,382	$6,410,382	$6,410,382	$6,410,382	$6,410,382	$6,410,382
325,000 cy @ Chief Timothy									
Mechanical Dredging, River to Transfer Site (Chief Timothy)									
Costs									
Transfer Material to Disposal Site (Page Creek) from Transfer Site (Chief Timothy)									
Costs	$0	0	0	0	0	0	0	0	0
	$0	$0	$0	$0	$0	$0	$0	$0	$0
Construction Subtotal	$4,901,992	$0	$863,181	$0	$0	$0	$0	$0	$0
O,M,R,R,R Subtotal	$3,895,990	$3,895,990	$10,306,372	$10,306,372	$10,306,372	$10,306,372	$10,306,372	$10,306,372	$10,306,372
	0								
	$0	$0	$0	$0	$0	$0	$0	$0	$0
Totals *$0.00*	$8,797,982	$3,895,990	$11,169,553	$10,306,372	$10,306,372	$10,306,372	$10,306,372	$10,306,372	$10,306,372

Years	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09

FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20
$3,895,990										
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$6,410,382	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682
0	$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$10,306,372	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$10,306,372	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240

FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20

FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682
$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240

FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32

FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43	FY44
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682
$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240

FY33 FY34 FY35 FY36 FY37 FY38 FY39 FY40 FY41 FY42 FY43 FY44

FY45	FY46	FY47	FY48	FY49	FY50	FY51	FY52	FY53	FY54	FY55	FY56
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682
$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240

FY45	FY46	FY47	FY48	FY49	FY50	FY51	FY52	FY53	FY54	FY55	FY56

FY57	FY58	FY59	FY60	FY61	FY62	FY63	FY64	FY65	FY66	FY67	FY68
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682
$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240

| FY57 | FY58 | FY59 | FY60 | FY61 | FY62 | FY63 | FY64 | FY65 | FY66 | FY67 | FY68 |

FY69	FY70	FY71	FY72	FY73	FY74	Subtotal 74 Years
						$0
						$38,959,900
						$5,765,173
$0	$0	$0	$0	$0	$0	$51,283,056
$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682	$1,818,682	$116,395,648
$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558	$3,917,558	$250,723,712
$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$5,765,173
$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$457,362,316
$0	$0	$0	$0	$0	$0	$0
$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$5,736,240	$463,127,489
FY69	FY70	FY71	FY72	FY73	FY74	74 Years

Upland 2.a.b.c.d

Dredging 1-M CuY Confl. Upland D
DMMS Dredging
of Snake & Clearwater Rivers
with Upland Disposal

Designed By: Walla Walla District COE
Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch
Kim Callan, Chief

Preparation Date: 05/28/99
Effective Date of Pricing: 05/01/99
Est Construction Time: 60 Days

Sales Tax: 7.90%

Currency in DOLLARS

LABOR ID: NAT99A EQUIP ID: NAT97C CREW ID: NAT99A UPB ID: UP99EA

Project Description: The Snake River dredging areas are assumed to extend from the vicinity of Silcott Island near Snake River Mile 131 upstream to the State Highway 12 bridge upstream of the confluence of the Snake and Clearwater Rivers, located near Snake River Mile 139.5. The Clearwater River dredging areas are assumed to extend from the Snake River confluence upstream to the Port of Lewiston, from Clearwater River Mile 0.00 to Clearwater River Mile 1.66. All material assumed to be disposed of utilizing a transfer station near Snake River Mile 131, located near the Mouth of Alpowa Creek where the material will be temporarily stored. The material will be rehandled from the Transfer Station to the final Disposal Area at the Page Creek - East Side Site. The disposal site is assumed adequate to contain all materials dredged.

Basis of Design: Planning level estimate produced utilizing the MICRO Computer Aided Cost Estimating System (MCACES) and Cost Engineering Dredge Estimating Program (CEDEP)

Overtime: Overtime is anticipated. The Government Estimate is based on a 24 hour operation. Work shall be conducted on a 24 hr/day, 3-8 hour shifts/day, 7 days/week, considering 4 holidays.

Construction Windows: Dredging operations will begin on 15 December, and shall not continue after 28 Feb, in any given year, due to the fish window requirements. Construction of the Transfer Station and the Disposal Area will occur during years one and two.

Sub Contracting Plan: No Sub Contracting considered all work to be performed by Prime Contractor.

Site Access: It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

Construction Methodology: Common dredging methods using 15cy clamshell dredges, with the use of scows for in-water disposal. The Transfer Station and the Disposal area will be constructed during the first two years. The first two years dredging material will be used for development of the Transfer Station. After year two the dredging material will be offloaded from the barges on to the Transfer Station site where the material will be alowed to dewater. The material may be moved from the Transfer Station to the final Disposal Area throughout the remainder of the year.

Conditions: This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accoúnted for within the effective working time. No adverse weather conditions other than normal
winter work weather has been assumed.

Equipment/Labor Availability &
Distance Traveled: Assume labor will be available within the project location. Equipment Mobilization will be from the Mouth of the Columbia

River to the Confluence of the Snake and Clearwater Rivers, approximately 463 River Miles to allow contractors from Portland & Seattle to compete. All equipment is considered owned - no rental equiment considered. All equipment other than the dredging plant rates were computed based on the EP 1110-1-8. All equipment other than Dredging Plant mob and demob costs computed as 5% of the direct costs.

Environmental Concerns: Turbidity monitoring will be required during the dredging operation. Sieve analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

Contingencies:
Total costs include Overhead and Profit. Escalation and contingencies are not included.

Effective dates for:
Labor: General Decision Number WA990001, Modification #1 dated 3/1/99.
Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Historical Dredging Equipment information.

	QUANTITY	UOM	TOTAL DIRECT	FOOH	HOOH	PROF	Misc Ta	BOND	TOTAL COST	UNIT COST
01 SNAKE RIVER DMMS 99										
01.12 NAVIGATION, PORTS & HARBORS										
01.12.06 DREDGING RIVERS										
01.12.06.01 MECH DREDGING, RIVER TO TRANSFER										
01.12.06.01.001- MOB. & DEMOB. AND PREWORK										
01.12.06.01.001-_01AA Mob. & Demob. Excavation Dredges	1.00	JB	275,294	27,529	15,141	27,822	0	3,467	349,254	349253.90
TOTAL MOB. & DEMOB. AND PREWORK	1.00	JB	275,294	27,529	15,141	27,822	0	3,467	349,254	349253.90
01.12.06.01.002- DREDGE, HAUL & OFF-LOAD MATERIAL										
01.12.06.01.002-_02BB Dredging & Haul Mat to Disposal	1000000	CY	1,860,000	186,000	102,300	187,976	0	23,427	2,359,704	2.36
01.12.06.01.002-_02EB Offloading Barge, with Clamshell	1000000	CY	688,205	68,821	37,851	69,552	0	8,668	873,097	0.87
01.12.06.01.002-_02EF Push Mat to Dry Area, by Dozer	1000000	CY	247,455	24,746	13,610	25,008	0	3,117	313,936	0.31
TOTAL DREDGE, HAUL & OFF-LOAD MATERIAL	1000000	CY	2,795,660	279,566	153,761	282,536	0	35,212	3,546,736	3.55
TOTAL MECH DREDGING, RIVER TO TRANSFER	1000000	CY	3,070,954	307,053	168,902	310,358	0	38,680	3,895,990	3.90
01.12.06.02 TRANSFER MATERIAL TO DISPOSAL										
01.12.06.02.001- HAUL MAT. TO DISPOSAL SITE										
01.12.06.02.001-_02AC Load, Haul, Spread in Disposal S	1000000	BCY	4,841,561	726,234	278,390	453,079	0	56,240	6,355,505	6.36
TOTAL HAUL MAT. TO DISPOSAL SITE	1000000	CY	4,841,561	726,234	278,390	453,079	0	56,240	6,355,505	6.36
01.12.06.02.002- RESTORATION OF SITES										
01.12.06.02.002-_02AA Upland Site, Hydro Seeding	5.00	AC	9,500	1,425	546	889	0	110	12,471	2494.12
01.12.06.02.002-_02AC Upland Site, Top Soil, L,H,S	4000.00	BCY	11,402	1,710	656	1,067	0	132	14,968	3.74
01.12.06.02.002-_02BA Transfer Site, Hydro Seeding	5.00	AC	9,500	1,425	546	889	0	110	12,471	2494.12
01.12.06.02.002-_02BC Transfer Site, Top Soil, L,H,S	4000.00	BCY	11,402	1,710	656	1,067	0	132	14,968	3.74
TOTAL RESTORATION OF SITES	10.00	AC	41,805	6,271	2,404	3,912	0	486	54,877	5487.72
TOTAL TRANSFER MATERIAL TO DISPOSAL	1000000	CY	4,883,366	732,505	280,794	456,992	0	56,726	6,410,382	6.41
01.12.06.03 DISPOSAL/TRANSFER DEV, CHIEF TIM										
01.12.06.03.001- TRANS,RIVER DIKE & SP BARGE SLIP										

		QUANTITY	UOM	TOTAL DIRECT	FOOH	HOOH	PROF	Misc Ta	BOND	TOTAL COST	UNIT COST
01.12.06.03.001-_02AA	T-RS Berm, Earth Fill, L,H,D,&C	40000.00	BCY	193,105	28,966	11,104	20,403	0	2,411	255,988	6.40
01.12.06.03.001-_02AB	T-RS Barge Tie-off, Sheet Piling	52000.00	SF	1,006,485	150,973	57,873	106,341	0	12,566	1,334,239	25.66
01.12.06.03.001-_02DB	T-RS Barge Tie-off,(Wood pole)	576.00	LF	22,883	3,432	1,316	2,418	0	286	30,334	52.66
01.12.06.03.001-_03AB	T-Barge Tie-off,Piling Anchr-Blk	780.00	CY	167,151	25,073	9,611	17,661	0	2,087	221,583	284.08
	TOTAL TRANS,RIVER DIKE & SP BARGE SLIP	2600.00	LF	1,389,624	208,444	79,903	146,822	0	17,350	1,842,144	708.52
01.12.06.03.002-	TRANSFER DIKES, (LAND SIDE)										
01.12.06.03.002-_02AA	T-Berm, Earth Fill, L,H,D,&C	56260.00	BCY	272,548	40,882	15,672	28,796	0	3,403	361,301	6.42
01.12.06.03.002-_02BA	T-Berm, Earth Fill, Geotextile	12250.00	SY	36,517	5,478	2,100	3,858	0	456	48,408	3.95
01.12.06.03.002-_02KK	T-Berm, Fence Galv,	5300.00	LF	39,201	5,880	2,254	4,142	0	489	51,967	9.81
01.12.06.03.002-_02RE	T-Berm,R-Prot,RipRap Beddg,6"Thk	520.00	CY	6,780	1,017	390	716	0	85	8,987	17.28
01.12.06.03.002-_02RR	T-Berm,R-Prot,RipRap Rock 2'Thk	2075.00	CY	76,339	11,451	4,390	8,066	0	953	101,198	48.77
01.12.06.03.002-_02TA	T-Berm, Seeding Earth Fill	2.50	ACR	4,750	713	273	502	0	59	6,297	2518.72
	TOTAL TRANSFER DIKES, (LAND SIDE)	5150.00	LF	436,135	65,420	25,078	46,080	0	5,445	578,159	112.26
01.12.06.03.003-	TRANS,SETTLEMENTATION PONDS,4 EA										
01.12.06.03.003-_02AA	T-Berm,Earth Fill, Settling Pond	2800.00	BCY	13,265	1,990	763	1,402	0	166	17,584	6.28
01.12.06.03.003-_02KA	T-Berm,Earth Fill, Detentin Pond	26000.00	BCY	126,826	19,024	7,293	13,400	0	1,583	168,126	6.47
01.12.06.03.003-_03AA	T-Berm,S&D Pond,OverflowConc Str	8.00	EA	50,724	7,609	2,917	5,359	0	633	67,242	8405.24
01.12.06.03.003-_03MA	T-Berm,S&D Pond,Pump Col ConcStr	4.00	EA	20,989	3,148	1,207	2,218	0	262	27,824	6955.97
01.12.06.03.003-_03OA	T-Berm, S&D Pond,Pumps Pads	4.00	EA	19,883	2,982	1,143	2,101	0	248	26,358	6589.41
	TOTAL TRANS,SETTLEMENTATION PONDS,4 EA	1.00	SF	231,687	34,753	13,322	24,479	0	2,893	307,134	307134.05
01.12.06.03.004-	TRANS(BRIDGE)CRANE RAIL,UNL BARG										
01.12.06.03.004-_02BA	T-BCR Set &Drive H-12x84 Columns	8400.00	LF	256,245	38,437	14,734	27,074	0	3,199	339,689	40.44
01.12.06.03.004-_03AA	T-BCR Elevated Concrete Beams	1640.00	CY	675,293	101,294	38,829	71,349	0	8,431	895,196	545.85
01.12.06.03.004-_05AA	T-BCR Crane Rails -Bridge Crane	4200.00	LF	140,877	21,131	8,100	14,884	0	1,759	186,752	44.46
01.12.06.03.004-_13AA	Purchased Crane Cost in Eq Rates	2.00	EA	0	0	0	0	0	0	0	0.01
	TOTAL TRANS(BRIDGE)CRANE RAIL,UNL BARG	2100.00	LF	1,072,414	160,862	61,664	113,307	0	13,389	1,421,637	676.97
01.12.06.03.005-	BRIDGE FOR HIGHWAY CROSSING										
01.12.06.03.005-_02AA	Ramps, Earthern Fill, L,H,D,&C	18600.00	BCY	88,972	13,346	5,116	9,401	0	1,111	117,946	6.34
01.12.06.03.005-_02AC	Ramps, Earthern Fill, Prep	560.00	BCY	1,253	188	72	132	0	16	1,661	2.97
01.12.06.03.005-_02BB	Ramps, Compt Gravel Fill, 6" Thk	560.00	CY	7,301	1,095	420	771	0	91	9,679	17.28
01.12.06.03.005-_03KP	Bridge & Abuts, Concr 30'W 46'L	1260.00	SF	126,000	18,900	7,245	13,313	0	1,573	167,031	132.56
	TOTAL BRIDGE FOR HIGHWAY CROSSING	1050.00	LF	223,526	33,529	12,853	23,617	0	2,791	296,316	282.21

		QUANTITY	UOM	TOTAL DIRECT	FOOH	HOOH	PROF	Misc	Ta	BOND	TOTAL COST	UNIT COST
01.12.06.03.006-	UPLAND DISPOSAL HAUL ROAD											
01.12.06.03.006-_02AA	Access Road, Clear & Grub	10.00	ACR	12,788	1,918	735	1,351	0		160	16,952	1695.21
01.12.06.03.006-_02AC	Access Road, Cut & Fill - L,H,S	75000.00	BCY	198,747	29,812	11,428	20,999	0		2,481	263,468	3.51
01.12.06.03.006-_02AE	Access Road, Earthern Fill, Prep	3100.00	BCY	6,935	1,040	399	733	0		87	9,193	2.97
01.12.06.03.006-_02BB	Access Road, Gravel Fill, 6"Thk	3100.00	CY	40,417	6,063	2,324	4,270	0		505	53,578	17.28
01.12.06.03.006-_02EA	Access Road, Culvert 18"Dia 10Ea	500.00	LF	11,324	1,699	651	1,197	0		141	15,012	30.02
01.12.06.03.006-_02EC	Access Road, Ditches	7700.00	LF	14,214	2,132	817	1,502	0		177	18,843	2.45
01.12.06.03.006-_02TA	Access Road, Seeding	5.00	ACR	9,500	1,425	546	1,004	0		119	12,594	2518.72
	TOTAL UPLAND DISPOSAL HAUL ROAD	7000.00	LF	293,925	44,089	16,901	31,055	0		3,670	389,640	55.66
01.12.06.03.007-	UPLAND DISPOSAL SITE DEVELOPMENT											
01.12.06.03.007-_02AA	D-Containment Berm, Dike	2700.00	CY	6,864	1,030	395	725	0		86	9,099	3.37
01.12.06.03.007-_02BA	D-Containment Berm, Geotextile	6800.00	SY	20,271	3,041	1,166	2,142	0		253	26,872	3.95
01.12.06.03.007-_02EA	D-Containment Berm,Culvert12"Dia	280.00	LF	4,762	714	274	503	0		59	6,313	22.55
01.12.06.03.007-_02EC	D-Containment Berm,Culvert18"Dia	500.00	LF	11,324	1,699	651	1,197	0		141	15,012	30.02
01.12.06.03.007-_02SA	D-Containment Berm, Top Soil	1000.00	CY	2,542	381	146	269	0		32	3,370	3.37
01.12.06.03.007-_02TA	D-Containment Berm, Seeding	2.50	ACR	4,750	713	273	502	0		59	6,297	2518.72
	TOTAL UPLAND DISPOSAL SITE DEVELOPMENT	2000000	CY	50,513	7,577	2,905	5,337	0		631	66,963	0.03
	TOTAL DISPOSAL/TRANSFER DEV, CHIEF TIM	1000000	CY	3,697,826	554,674	212,625	390,698	0		46,169	4,901,992	4.90
01.12.06.99	DISPOSAL/TRANSFER CAP, CHIEF TIM											
01.12.06.99.001-	RCC COMPACTED CONCRETE CAP											
01.12.06.99.001-_02AB	RCC Prep, Grade and Compact Site	272997.00	SF	18,073	2,711	1,039	1,910	0		335	24,068	0.09
01.12.06.99.001-_02BB	RCC Compacted Gravel Fill, 6"Thk	5056.00	CY	65,924	9,889	3,791	6,965	0		1,222	87,790	17.36
01.12.06.99.001-_03BB	RCC Compacted Concrete, 1' Thick	10111.00	CY	564,189	84,628	32,441	59,610	0		10,455	751,323	74.31
	TOTAL RCC COMPACTED CONCRETE CAP	10111.00	CY	648,186	97,228	37,271	68,485	0		12,012	863,181	85.37
	TOTAL DISPOSAL/TRANSFER CAP, CHIEF TIM	272997.00	SF	648,186	97,228	37,271	68,485	0		12,012	863,181	3.16
	TOTAL DREDGING RIVERS	1000000	CY	12,300,332	1,691,502	699,592	1,226,533	0		153,586	16,071,544	16.07
	TOTAL NAVIGATION, PORTS & HARBORS			12,300,332	1,691,502	699,592	1,226,533	0		153,586	16,071,544	
	TOTAL SNAKE RIVER DMMS 99			12,300,332	1,691,502	699,592	1,226,533	0		153,586	16,071,544	
	TOTAL Dredging 1-M CuY Confl. Upland D			12,300,332	1,691,502	699,592	1,226,533	0		153,586	16,071,544	

No errors detected...

* * * END OF ERROR REPORT * * *

* * * END TABLE OF CONTENTS * * *

Upland 2.e

Dredging 325tCuY Confl. Upland D
DMMS Dredging
of Snake & Clearwater Rivers
with Upland Disposal

Designed By: Walla Walla District COE
Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch
Kim Callan, Chief

Preparation Date: 05/28/99
Effective Date of Pricing: 05/01/99
Est Construction Time: 60 Days

Sales Tax: 7.90%

Project Description:
The Snake River dredging areas are assumed to extend from the vicinity of Silcott Island near Snake River Mile 131 upstream to the State Highway 12 bridge upstream of the confluence of the Snake and Clearwater Rivers, located near Snake River Mile 139.5. The Clearwater River dredging areas are assumed to extend from the Snake River confluence upstream to the Port of Lewiston, from Clearwater River Mile 0.00 to Clearwater River Mile 1.66.
All material assumed to be disposed of utilizing a transfer station near Snake River Mile 131, located near the Mouth of Alpowa Creek where the material will be temporarily stored. The material will be rehandled from the Transfer Station to the final Disposal Area at the Page Creek - East Side Site. The disposal site is assumed adequate to contain all materials dredged.

Basis of Design:
Planning level estimate produced utilizing the MICRO Computer Aided Cost Estimating System (MCACES) and Cost Engineering Dredge Estimating Program (CEDEP)

Overtime:
Overtime is anticipated. The Government Estimate is based on a 24 hour operation. Work shall be conducted on a 24 hr/day, 3-8 hour shifts/day, 7 days/week, considering 4 holidays.

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Sub Contracting Plan:
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Site Access:
It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

Construction Methodology:
Common dredging methods using 15cy clamshell dredges, with the use of scows for in-water disposal. The dredging material will be offloaded from the barges on to the transfer site where the material will be allowed to dewater. the materail may be moved from the Transfer Station to the final Disposal Area throughout the remainder of the year.

Conditions:
This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

Equipment/Labor Availability & Distance Traveled:
Assume labor will be available within the project location. Equipment

Mobilization will be from the Mouth of the Columbia River to the Confluence of the Snake and Clearwater Rivers, approximately 463 River Miles to allow contractors from Portland & Seattle to compete. All equipment is considered owned - no rental equipment considered. all equipment other than dredging plant rates were computed based on the EP 1110-1-8. All equipment other than Dredging Plant mob and demob costs computed as 5% of the direct costs.

Environmental Concerns:
Turbidity monitoring will be required during the dredging operation. Sieve analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

Contingencies:
Total costs include Overhead and Profit. Escalation and contingencies are not included.

Effective dates for:
Labor: General Decision Number WA990001, Modification #1 dated 3/1/99.
Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Historical Dredging Equipment information.

	QUANTITY	UOM	TOTAL DIRECT	FOOH	HOOH	PROF	Misc Ta	BOND	TOTAL COST	UNIT COST
01 SNAKE RIVER DMMS 99										
01.12 NAVIGATION, PORTS & HARBORS										
01.12.06 DREDGING RIVERS										
01.12.06.01 MECH DREDGING, RIVER TO TRANSFER										
01.12.06.01.001- MOB. & DEMOB. AND PREWORK										
01.12.06.01.001-_01AA Mob. & Demob. Excavation Dredges	1.00	JB	249,956	24,996	13,748	25,261	0	3,751	317,711	317711.39
TOTAL MOB. & DEMOB. AND PREWORK	1.00	JB	249,956	24,996	13,748	25,261	0	3,751	317,711	317711.39
01.12.06.01.002- DREDGE, HAUL & OFF-LOAD MATERIAL										
01.12.06.01.002-_02BB Dredging & Haul Mat to Disposal	325000.00	CY	861,250	86,125	47,369	87,040	0	12,925	1,094,708	3.37
01.12.06.01.002-_02EB Offloading Barge, with Clamshell	325000.00	CY	235,133	23,513	12,932	23,763	0	3,529	298,870	0.92
01.12.06.01.002-_02EF Push Mat to Dry Area, by Dozer	325000.00	CY	84,489	8,449	4,647	8,539	0	1,268	107,392	0.33
TOTAL DREDGE, HAUL & OFF-LOAD MATERIAL	325000.00	CY	1,180,872	118,087	64,948	119,342	0	17,721	1,500,970	4.62
TOTAL MECH DREDGING, RIVER TO TRANSFER	325000.00	CY	1,430,828	143,083	78,696	144,603	0	21,472	1,818,682	5.60
01.12.06.02 TRANSFER MATERIAL TO DISPOSAL										
01.12.06.02.001- HAUL MAT. TO DISPOSAL SITE										
01.12.06.02.001-_02AC Load, Haul, Spread in Disposal S	325000.00	BCY	1,574,721	236,208	90,546	147,364	0	23,945	2,072,785	6.38
TOTAL HAUL MAT. TO DISPOSAL SITE	325000.00	CY	1,574,721	236,208	90,546	147,364	0	23,945	2,072,785	6.38
01.12.06.02.002- RESTORATION OF SITES										
01.12.06.02.002-_02AA Upland Site, Hydro Seeding	2.50	AC	4,750	713	273	445	0	72	6,252	2500.95
01.12.06.02.002-_02AC Upland Site, Top Soil, L,H,S	2167.00	BCY	5,161	774	297	483	0	78	6,793	3.13
01.12.06.02.002-_02BA Transfer Site, Hydro Seeding	2.50	AC	4,750	713	273	445	0	72	6,252	2500.95
01.12.06.02.002-_02BC Transfer Site, Top Soil, L,H,S	2167.00	BCY	5,161	774	297	483	0	78	6,793	3.13
TOTAL RESTORATION OF SITES	5.00	AC	19,822	2,973	1,140	1,855	0	301	26,091	5218.19
TOTAL TRANSFER MATERIAL TO DISPOSAL	325000.00	CY	1,594,543	239,181	91,686	149,219	0	24,246	2,098,876	6.46
TOTAL DREDGING RIVERS	325000.00	CY	3,025,371	382,264	170,382	293,822	0	45,718	3,917,558	12.05
TOTAL NAVIGATION, PORTS & HARBORS			3,025,371	382,264	170,382	293,822	0	45,718	3,917,558	

	QUANTITY	UOM	TOTAL DIRECT	FOOH	HOOH	PROF	Misc Ta	BOND	TOTAL COST	UNIT COST
TOTAL SNAKE RIVER DMMS 99			3,025,371	382,264	170,382	293,822	0	45,718	3,917,558	
TOTAL Dredging 325tCuY Confl. Upland D			3,025,371	382,264	170,382	293,822	0	45,718	3,917,558	

No errors detected...

* * * END OF ERROR REPORT * * *

* * * END TABLE OF CONTENTS * * *

Upland 3 Proration

'PRORATING OF COST Lower Granite Pool 300,000 CY Annually

Years	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
300,000 cy @ JOSO									
Mechanical Dredging, River to Transfer Site (Joso)									
Costs	$2,884,594	$2,884,594	$2,884,594	$2,884,594	$2,884,594	$2,884,594	$2,884,594	$2,884,594	$2,884,594
Disposal (Joso) Site Development									
Costs	$4,913,439	$0	$0	$0	$0	$0	$0	$0	$0
Transfer Material to Disposal Site (Joso)									
Costs	$1,939,360	$1,939,360	$1,939,360	$1,939,360	$1,939,360	$1,939,360	$1,939,360	$1,939,360	$1,939,360
300,000 cy @ CHIEF TIMOTHY									
Mechanical Dredging, River to Transfer Site (Chief Timothy)									
Costs	$0	$0	$0	$0	$0	$0	$0	$0	$0
Transfer (Chief Timothy) Site Development									
Costs	$0	$0	$0	$0	$0	$0	$0	$0	$0
Transfer Material to Disposal Site (Page Creek) from Transfer Site (Chief Timothy)									
Costs			$0	$0	$0	$0	$0	$0	$0
Develop Page Creek Upland Disposal Site									
Costs	$0	$0	$0	$0	$0	$0	$0	$0	$0
	$0	$0	$0	$0	$0	$0	$0	$0	$0
Construction Subtotal	$4,913,439	$0	$0	$0	$0	$0	$0	$0	$0
O,M,R,R,R Subtotal	$4,823,954	$4,823,954	$4,823,954	$4,823,954	$4,823,954	$4,823,954	$4,823,954	$4,823,954	$4,823,954
	0								
	$0	$0	$0	$0	$0	$0	$0	$0	$0
Totals *$0.00*	$9,737,393	$4,823,954	$4,823,954	$4,823,954	$4,823,954	$4,823,954	$4,823,954	$4,823,954	$4,823,954

Years	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09

FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20
$2,884,594	$2,884,594	$2,884,594	$2,884,594	$2,884,594	$2,884,594	$2,884,594	$2,884,594	$2,884,594	$2,884,594	$2,884,594
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$1,939,360	$1,939,360	$1,939,360	$1,939,360	$1,939,360	$1,939,360	$1,939,360	$1,939,360	$1,939,360	$1,939,360	$1,939,360
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$4,823,954	$4,823,954	$4,823,954	$4,823,954	$4,823,954	$4,823,954	$4,823,954	$4,823,954	$4,823,954	$4,823,954	$4,823,954
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$4,823,954	$4,823,954	$4,823,954	$4,823,954	$4,823,954	$4,823,954	$4,823,954	$4,823,954	$4,823,954	$4,823,954	$4,823,954

FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20

FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357
$4,149,074							$863,181				
$0	$0	$0	$0	$0	$0	$0	$1,934,734	$1,934,734	$1,934,734	$1,934,734	$1,934,734
$0	$0	$0	$0		$0	$752,919	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$4,149,074	$0	$0	$0	$0	$0	$752,919	$863,181	$0	$0	$0	$0
$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$5,830,431	$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357	$2,434,276	$4,479,272	$3,616,091	$3,616,091	$3,616,091	$3,616,091

FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32

FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43	FY44
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357
$1,934,734	$1,934,734	$1,934,734	$1,934,734	$1,934,734	$1,934,734	$1,934,734	$1,934,734	$1,934,734	$1,934,734	$1,934,734	$1,934,734
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091

| FY33 | FY34 | FY35 | FY36 | FY37 | FY38 | FY39 | FY40 | FY41 | FY42 | FY43 | FY44 |

FY45	FY46	FY47	FY48	FY49	FY50	FY51	FY52	FY53	FY54	FY55	FY56
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357
$1,934,734	$1,934,734	$1,934,734	$1,934,734	$1,934,734	$1,934,734	$1,934,734	$1,934,734	$1,934,734	$1,934,734	$1,934,734	$1,934,734
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091

FY45 FY46 FY47 FY48 FY49 FY50 FY51 FY52 FY53 FY54 FY55 FY56

FY57	FY58	FY59	FY60	FY61	FY62	FY63	FY64	FY65	FY66	FY67	FY68
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357
$1,934,734	$1,934,734	$1,934,734	$1,934,734	$1,934,734	$1,934,734	$1,934,734	$1,934,734	$1,934,734	$1,934,734	$1,934,734	$1,934,734
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091

FY57 FY58 FY59 FY60 FY61 FY62 FY63 FY64 FY65 FY66 FY67 FY68

FY69	FY70	FY71	FY72	FY73	FY74	Subtotal 74 Years
						$0
$0	$0	$0	$0	$0	$0	$57,691,880
$0	$0	$0	$0	$0	$0	$4,913,439
$0	$0	$0	$0	$0	$0	$38,787,200
$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357	$1,681,357	$90,793,278
						$5,012,255
$1,934,734	$1,934,734	$1,934,734	$1,934,734	$1,934,734	$1,934,734	$90,932,498
$0	$0	$0	$0	$0	$0	$752,919
$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$10,678,613
$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$278,204,856
$0	$0	$0	$0	$0	$0	$0
$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$3,616,091	$288,883,469
FY69	FY70	FY71	FY72	FY73	FY74	74 Years

Upland 3.a.b

Dredging 3hT CuY Confl.Upland#29
DMMS Dredging
of Snake & Clearwater Rivers
with Upland Disposal

Designed By: Walla Walla District COE
Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch
Kim Callan, Chief

Preparation Date: 05/28/99
Effective Date of Pricing: 05/01/99
Est Construction Time: 60 Days

Sales Tax: 7.90%

Project Description:
The Snake River dredging areas are assumed to extend from the vicinity of Silcott Island near Snake River Mile 131 upstream to the State Highway 12 bridge upstream of the confluence of the Snake and Clearwater Rivers, located near Snake River Mile 139.5. The Clearwater River dredging areas are assumed to extend from the Snake River confluence upstream to the Port of Lewiston, from Clearwater River Mile 0.00 to Clearwater River Mile 1.66.
All material assumed to be disposed of utilizing a Disposal Area at Joso near river mile 56. The Disposal Area is assumed adequate to contain all materials dredged.

Basis of Design:
Planning level estimate produced utilizing MICRO Computer Aided Cost Estimating Program (MCACES) and the Cost Engineering Dredge Estimating Program (CEDEP)

Overtime:
Overtime is anticipated. The Government Estimate is based on a 24 hour operation. Work shall be conducted on a 24 hr/day, 3-8 hour shifts/day, 7 days/week, considering 4 holidays.

Construction Windows:
Dredging operations will begin on 15 December, and shall not continue after 28 Feb, in any given year, due to the fish window requirements.

Sub Contracting Plan:
No Sub Contracting considered all work to be performed by Prime Contractor.

Site Access:
It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

Construction Methodology:
Common dredging methods using 15cy clamshell dredges, with the use of scows for in-water disposal. Construction of the Disposal Area will occur during the first year. The dredging material will be offlaoded from the barges on to the Disposal Area.

Conditions:
This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

Equipment/Labor Availability & Distance Traveled:
Assume labor will be available within the project location. Equipment Mobilization will be from the Mouth of the Columbia River to the Confluence of the Snake and Clearwater Rivers, approximately 463 River Miles to allow contractors from Portland & Seattle to compete. All equipment is considered owned - no rental equipment considered. All equipment other than dredging

plant rates were computed based on the EP 1110-1-8. All equipment other than dredging plant mob and demob costs computed as 5% of the direct costs.

Environmental Concerns:
Turbidity monitoring will be required during the dredging operation. Sieve analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

Contingencies:
Total costs include Overhead and Profit. Escalation and contingencies are not included.

Effective dates for:
Labor: General Decision Number WA990001, Modification #1 dated 3/1/99.
Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Historical Dredging Equipment information.

	QUANTITY	UOM	TOTAL DIRECT	FOOH	HOOH	PROF	Misc Ta	BOND	TOTAL COST	UNIT COST
01 SNAKE RIVER DMMS 99										
01.12 NAVIGATION, PORTS & HARBORS										
01.12.06 DREDGING RIVERS										
01.12.06.01 MECH DREDGING, RIVER TO TRANSFER										
01.12.06.01.001- MOB. & DEMOB. AND PREWORK										
01.12.06.01.001-_01AA Mob. & Demob. Excavation Dredges	1.00	JB	249,305	24,931	13,712	25,195	0	3,419	316,561	316561.22
TOTAL MOB. & DEMOB. AND PREWORK	1.00	JB	249,305	24,931	13,712	25,195	0	3,419	316,561	316561.22
01.12.06.01.002- DREDGE, HAUL & OFF-LOAD MATERIAL										
01.12.06.01.002-_02BB Dredging & Haul Mat to Transfer	300000.00	CY	1,488,000	148,800	81,840	150,381	0	20,404	1,889,425	6.30
01.12.06.01.002-_02EB Off Loading Barge, W/Clamshell	300000.00	CY	534,431	53,443	29,394	54,011	0	7,328	678,607	2.26
TOTAL DREDGE, HAUL & OFF-LOAD MATERIAL	300000.00	CY	2,022,431	202,243	111,234	204,392	0	27,732	2,568,032	8.56
TOTAL MECH DREDGING, RIVER TO TRANSFER	300000.00	CY	2,271,736	227,174	124,945	229,587	0	31,151	2,884,594	9.62
01.12.06.02 TRANSFER MATERIAL TO DISPOSAL										
01.12.06.02.001- HAUL MAT. TO DISPOSAL SITE										
01.12.06.02.001-_02AA Load, Haul, Dump & Compact D-Mat	300000.00	BCY	1,321,381	198,207	182,351	170,194	0	22,140	1,894,273	6.31
TOTAL HAUL MAT. TO DISPOSAL SITE	300000.00	CY	1,321,381	198,207	182,351	170,194	0	22,140	1,894,273	6.31
01.12.06.02.002- RESTORATION-TRANSFER/DISPL SITES										
01.12.06.02.002-_02AA Transfer Site, Hydro Seeding	2.00	AC	6,000	900	828	773	0	101	8,601	4300.67
01.12.06.02.002-_02BA Load, Haul, Dump &Compact T-Soil	2000.00	BCY	9,726	1,459	1,342	1,253	0	163	13,942	6.97
01.12.06.02.002-_02KA Disposal Site, Hydro Seeding	2.00	AC	6,000	900	828	773	0	101	8,601	4300.67
01.12.06.02.002-_02KB Load, Haul, Dump &Compact T-Soil	2000.00	BCY	9,726	1,459	1,342	1,253	0	163	13,942	6.97
TOTAL RESTORATION-TRANSFER/DISPL SITES	4.00	AC	31,452	4,718	4,340	4,051	0	527	45,088	11271.91
TOTAL TRANSFER MATERIAL TO DISPOSAL	300000.00	CY	1,352,833	202,925	186,691	174,245	0	22,667	1,939,360	6.46
01.12.06.03 DISPOSAL/TRANSFER DEVELOMENT #29										
01.12.06.03.001- RIVER SIDE DIKE & WE BARGE SLIP										

		QUANTITY	UOM	TOTAL DIRECT	FOOH	HOOH	PROF	Misc Ta	BOND	TOTAL COST	UNIT COST
01.12.06.03.001-_02AA	RS Berm, Earthern Fill, L,H,D,&C	5000.00	BCY	24,600	3,690	1,414	2,599	0	307	32,610	6.52
01.12.06.03.001-_02AB	RS Barge Tie-off, Sheet Piling	70000.00	SF	1,354,884	203,233	77,906	143,152	0	16,908	1,796,082	25.66
01.12.06.03.001-_02DB	RS Barge Tie-off,(Wood pole)50@c	380.00	LF	15,096	2,264	868	1,595	0	188	20,012	52.66
01.12.06.03.001-_02KB	RS Exc ULoading Area,W/Clamshell	38890.00	CY	46,796	7,019	2,691	4,944	0	584	62,034	1.60
01.12.06.03.001-_03AB	Barge Tie-off,Piling Anchr-Block	525.00	CY	113,039	16,956	6,500	11,943	0	1,411	149,849	285.43
	TOTAL RIVER SIDE DIKE & WE BARGE SLIP	1750.00	LF	1,554,415	233,162	89,379	164,234	0	19,398	2,060,587	1177.48
01.12.06.03.002-	RIVER SIDE DIKE & EE BARGE SLIP										
01.12.06.03.002-_02AA	RS Berm, Earthern Fill, L,H,D,&C	5000.00	BCY	24,600	3,690	1,414	2,599	0	307	32,610	6.52
01.12.06.03.002-_02AB	RS Barge Tie-off, Sheet Piling	70000.00	SF	1,354,884	203,233	77,906	143,152	0	16,908	1,796,082	25.66
01.12.06.03.002-_02DB	RS Barge Tie-off,(Wood pole)50@c	380.00	LF	15,096	2,264	868	1,595	0	188	20,012	52.66
01.12.06.03.002-_02KB	RS Exc Uloading Area,W/Clamshell	38890.00	CY	46,796	7,019	2,691	4,944	0	584	62,034	1.60
01.12.06.03.002-_03AB	Barge Tie-off,Piling Anchr-Block	525.00	CY	113,039	16,956	6,500	11,943	0	1,411	149,849	285.43
	TOTAL RIVER SIDE DIKE & EE BARGE SLIP	1750.00	LF	1,554,415	233,162	89,379	164,234	0	19,398	2,060,587	1177.48
01.12.06.03.003-	TRANSFER SITE (WEST END) DIKES										
01.12.06.03.003-_A02A	TRANS Containment Berm, Dike Exc	200.00	CY	508	76	29	54	0	6	674	3.37
01.12.06.03.003-_A02B	TRANSContainment Berm,Geotextile	820.00	SY	2,444	367	141	258	0	31	3,240	3.95
01.12.06.03.003-_A02S	TRANS Containment Berm, Top Soil	270.00	CY	686	103	39	73	0	9	910	3.37
01.12.06.03.003-_A02T	TRANS Containment Berm, Seeding	1.00	ACR	3,500	525	201	370	0	44	4,640	4639.72
01.12.06.03.003-_B02A	TRANS Settling Pond, Dike	420.00	CY	1,068	160	61	113	0	13	1,415	3.37
01.12.06.03.003-_C02A	TRANS Detention Pond, Dike	230.00	CY	585	88	34	62	0	7	775	3.37
01.12.06.03.003-_D02K	TRANS Fence Galv, Posts in Earth	2000.00	LF	16,308	2,446	938	1,723	0	204	21,619	10.81
01.12.06.03.003-_D03A	TRANS Overflow Strs between Pond	2.00	EA	6,249	937	359	660	0	78	8,285	4142.25
	TOTAL TRANSFER SITE (WEST END) DIKES	5150.00	LF	31,349	4,702	1,803	3,312	0	391	41,558	8.07
01.12.06.03.004-	TRANSFER SITE (EAST END) DIKES										
01.12.06.03.004-_A02A	TRANS Containment Berm, Dike Exc	200.00	CY	508	76	29	54	0	6	674	3.37
01.12.06.03.004-_A02B	TRANSContainment Berm,Geotextile	820.00	SY	2,444	367	141	258	0	31	3,240	3.95
01.12.06.03.004-_A02S	TRANS Containment Berm, Top Soil	270.00	CY	686	103	39	73	0	9	910	3.37
01.12.06.03.004-_A02T	TRANS Containment Berm, Seeding	1.00	ACR	3,500	525	201	370	0	44	4,640	4639.72
01.12.06.03.004-_B02A	TRANS Settling Pond, Dike	420.00	CY	1,068	160	61	113	0	13	1,415	3.37
01.12.06.03.004-_C02A	TRANS Detention Pond, Dike	230.00	CY	585	88	34	62	0	7	775	3.37
01.12.06.03.004-_D02K	TRANS Fence Galv, Posts in Earth	2000.00	LF	16,308	2,446	938	1,723	0	204	21,619	10.81
01.12.06.03.004-_D03A	TRANS Overflow Strs between Pond	2.00	EA	6,249	937	359	660	0	78	8,285	4142.25
	TOTAL TRANSFER SITE (EAST END) DIKES	5150.00	LF	31,349	4,702	1,803	3,312	0	391	41,558	8.07
01.12.06.03.005-	ACCESS ROADS & HAUL ROAD										

		QUANTITY	UOM	TOTAL DIRECT	FOOH	HOOH	PROF	Misc	Ta	BOND	TOTAL COST	UNIT COST
01.12.06.03.005-_02AA	Access Road, Clear, Grub & Shape	7500.00	LF	26,753	4,013	1,538	2,827	0		334	35,464	4.73
	TOTAL ACCESS ROADS & HAUL ROAD	1.00	EA	26,753	4,013	1,538	2,827	0		334	35,464	35464.06
01.12.06.03.006-	DISPOSAL SITE DIKES											
01.12.06.03.006-_A02A	DISP Containment Berm, Dike Exc	6700.00	CY	17,033	2,555	979	1,800	0		213	22,579	3.37
01.12.06.03.006-_A02B	DISP Containment Berm,Geotextile	154000.00	SY	459,071	68,861	26,397	48,504	0		5,729	608,561	3.95
01.12.06.03.006-_A02S	DISP Containment Berm, Top Soil	2480.00	CY	6,305	946	363	666	0		79	8,358	3.37
01.12.06.03.006-_A02T	DISP Containment Berm, Seeding	4.00	ACR	14,000	2,100	805	1,479	0		175	18,559	4639.72
01.12.06.03.006-_B02A	DISP Settling Pond, Dike	840.00	CY	2,135	320	123	226	0		27	2,831	3.37
01.12.06.03.006-_C02A	DISP Detention Pond, Dike	460.00	CY	1,169	175	67	124	0		15	1,550	3.37
01.12.06.03.006-_D03A	DISP Overflow Strs between Ponds	2.00	EA	8,484	1,273	488	896	0		106	11,247	5623.64
	TOTAL DISPOSAL SITE DIKES	7000.00	LF	508,198	76,230	29,221	53,694	0		6,342	673,685	96.24
	TOTAL DISPOSAL/TRANSFER DEVELOMENT #29	300000.00	CY	3,706,478	555,972	213,122	391,613	0		46,254	4,913,439	16.38

No errors detected...

* * * END OF ERROR REPORT * * *

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* * * END TABLE OF CONTENTS * * *

Upland 3.c.d.e.f

Dredging 3hT CuY Confl. Upland D
DMMS Dredging
of Snake & Clearwater Rivers
with Upland Disposal

Designed By: Walla Walla District COE
Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch
Kim Callan, Chief

Preparation Date: 05/28/99
Effective Date of Pricing: 05/01/99
Est Construction Time: 60 Days

Sales Tax: 7.90%

Project Description: The Snake River dredging areas are assumed to extend from the vicinity of Silcott Island near Snake River Mile 131 upstream to the State Highway 12 bridge upstream of the confluence of the Snake and Clearwater Rivers, located near Snake River Mile 139.5. The Clearwater River dredging areas are assumed to extend from the Snake River confluence upstream to the Port of Lewiston, from Clearwater River Mile 0.00 to Clearwater River Mile 1.66. All material assumed to be disposed of utilizing a Transfer Station near Snake River Mile 131, located near the Mouth of Alpowa Creek where the material will be temporarily stored. The material will be rehandled from the Transfer Station to the final Disposal Area at the Page Creek - East Side Site. The disposal site is assumed adequate to contain all materials dredged.

Basis of Design: Planning level estimate produced utilizing the MICRO Computer Aided Cost Estimating System (MCACES) and Cost Engineering Dredge Estimating Program (CEDEP)

Overtime: Overtime is anticipated. The Government Estimate is based on a 24 hour operation. Work shall be conducted on a 24 hr/day, 3-8 hour shifts/day, 7 days/week, considering 4 holidays.

Construction Windows: Dredging operations will begin on 15 December, and shall not continue after 28 Feb, in any given year, due to the fish window requirements. Construction of the Transfer Station and the Disposal Area will occur during year the first 7 years.

Sub Contracting Plan: No Sub Contracting considered all work to be performed by Prime Contractor.

Site Access: It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

Construction Methodology: Common dredging methods using 15cy clamshell dredges, with the use of scows for in-water disposal. The Transfer Station will be constructed during the first year. The first seven years dredging material will be used for developement of the Transfer Station. The Disposal Area wil be constructed during year seven. After year seven the dredging material will be offloaded from the barges on to the transfer site where the material will be allowed to dewater. The material may be moved from the Transfer Station to the Disposal Area throughout the remainder of the year.

Conditions: This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

Equipment/Labor Availability & Distance Traveled: Assume labor will be available within the project location. Equipment Mobilization will be from the Mouth of the Columbia River to the Confluence of the Snake and

Clearwater Rivers, approximately 463 River Miles to allow contractors from Portland & Seattle to compete. All equipment is considered owned - no rental equipment considered. All equipment other than dredging plant rates were computed based on the EP 1110-1-8. All equipment other than dredging plant mob and demob costs computed as 5% of direct costs.

Environmental Concerns: Turbidity monitoring will be required during the dredging operation. Sieve analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

Contingencies:
Total costs include Overhead and Profit. Escalation and contingencies are not included.

Effective dates for:
Labor: General Decision Number WA990001, Modification #1 dated 3/1/99!
Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Historical Dredging Equipment information.

	QUANTITY	UOM	TOTAL DIRECT	FOOH	HOOH	PROF	Misc Ta	BOND	TOTAL COST	UNIT COST
01 SNAKE RIVER DMMS 99										
01.12 NAVIGATION, PORTS & HARBORS										
01.12.06 DREDGING RIVERS										
01.12.06.01 MECH DREDGING, RIVER TO TRANSFER										
01.12.06.01.001- MOB. & DEMOB. AND PREWORK	1.00	JB	249,956	24,996	13,748	25,261	0	3,801	317,761	317761.43
01.12.06.01.002- DREDGE, HAUL & OFF-LOAD MATERIAL	300000.00	CY	1,072,625	107,263	58,994	108,402	0	16,311	1,363,596	4.55
TOTAL MECH DREDGING, RIVER TO TRANSFER	300000.00	CY	1,322,581	132,259	72,742	133,663	0	20,112	1,681,357	5.60
01.12.06.02 TRANSFER MATERIAL TO DISPOSAL										
01.12.06.02.001- HAUL MAT. TO DISPOSAL SITE	300000.00	CY	1,451,712	217,757	83,473	135,853	0	22,345	1,911,141	6.37
01.12.06.02.002- RESTORATION OF SITES	4.00	AC	17,922	2,688	1,030	1,677	0	276	23,593	5898.33
TOTAL TRANSFER MATERIAL TO DISPOSAL	300000.00	CY	1,469,634	220,445	84,504	137,530	0	22,621	1,934,734	6.45
01.12.06.03 DISPOSAL/TRANSFER DEV, CHIEF TIM										
01.12.06.03.001- TRANS,RIVER DIKE & SP BARGE SLIP	2600.00	LF	1,389,624	208,444	79,903	146,822	0	17,350	1,842,144	708.52
01.12.06.03.002- TRANSFER DIKES (LAND SIDE)	5150.00	LF	436,135	65,420	25,078	46,080	0	5,445	578,159	112.26
01.12.06.03.003- TRANS,SETTLEMENTATION PONDS,4 EA	1.00	SF	231,687	34,753	13,322	24,479	0	2,893	307,134	307134.05
01.12.06.03.004- TRANS(BRIDGE)CRANE RAIL,UNL BARG	2100.00	LF	1,072,414	160,862	61,664	113,307	0	13,389	1,421,637	676.97
01.12.06.03.005- BRIDGE FOR HIGHWAY CROSSING	1050.00	LF	223,526	33,529	12,853	23,617	0	2,791	296,316	282.21
01.12.06.03.006- UPLAND DISPOSAL HAUL ROAD	7000.00	LF	293,925	44,089	16,901	31,055	0	3,670	389,640	55.66
01.12.06.03.007- UPLAND DISPOSAL SITE DEVELOPMENT	2000000	CY	50,513	7,577	2,905	5,337	0	631	66,963	0.03
TOTAL DISPOSAL/TRANSFER DEV, CHIEF TIM	300000.00	CY	3,697,826	554,674	212,625	390,698	0	46,169	4,901,992	16.34
01.12.06.99 DISPOSAL/TRANSFER CAP, CHIEF TIM										
01.12.06.99.001- RCC COMPACTED CONCRETE CAP	10111.00	CY	648,186	97,228	37,271	68,485	0	12,012	863,181	85.37
TOTAL DISPOSAL/TRANSFER CAP, CHIEF TIM	272997.00	SF	648,186	97,228	37,271	68,485	0	12,012	863,181	3.16
TOTAL DREDGING RIVERS	300000.00	CY	7,138,226	1,004,605	407,142	730,377	0	100,914	9,381,264	31.27
TOTAL NAVIGATION, PORTS & HARBORS			7,138,226	1,004,605	407,142	730,377	0	100,914	9,381,264	
TOTAL SNAKE RIVER DMMS 99			7,138,226	1,004,605	407,142	730,377	0	100,914	9,381,264	
TOTAL Dredging 3hT CuY Confl. Upland D			7,138,226	1,004,605	407,142	730,377	0	100,914	9,381,264	

No errors detected...

* * * END OF ERROR REPORT * * *

Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DMMU03: Dredging 3hT CuY Confl. Upland D - DMMS Dredging
PLANNING ESTIMATE - 300,000 CY DREDGE MATERIAL

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Upland 4 Proration

'PRORATING OF COST Lower Granite Pool 41,500 CY on 5 year intervals the first 10 years and 10 year intervals ther

Years	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
41,500 cy @ Joso									
Mechanical Dredging, River to Transfer Site (Joso)									
Costs	$0	$0	$0	$0	$673,429	$0	$0	$0	$0
Disposal (Joso) Site Development									
Costs	$0	$0	$0	$0	$2,198,955	$0	$0	$0	$0
Transfer Material to Disposal Site (Joso)									
Costs	$0	$0	$0	$0	$326,050	$0	$0	$0	$0
	$0	$0	$0	$0	$0	$0	$0	$0	$0
	$0	$0	$0	$0	$0	$0	$0	$0	$0
			$0	$0	$0	$0	$0	$0	$0
	$0	$0	$0	$0	$0	$0	$0	$0	$0
Construction Subtotal	$0	$0	$0	$0	$2,198,955	$0	$0	$0	$0
O,M,R,R,R Subtotal	$0	$0	$0	$0	$999,479	$0	$0	$0	$0
	0								
	$0	$0	$0	$0	$0	$0	$0	$0	$0
Totals *$0.00*	$0	$0	$0	$0	$3,198,434	$0	$0	$0	$0

Years	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09

eafter

FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20
$673,429	$0	$0	$0	$0	$0	$0	$0	$0	$0	$673,429
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$326,050	$0	$0	$0	$0	$0	$0	$0	$0	$0	$326,050
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$999,479	$0	$0	$0	$0	$0	$0	$0	$0	$0	$999,479
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$999,479	$0	$0	$0	$0	$0	$0	$0	$0	$0	$999,479

FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20

FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32
$0	$0	$0	$0	$0	$0	$0	$0	$0	$673,429	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$326,050	$0	$0
$0											
$0	$0	$0	$0		$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$999,479	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$999,479	$0	$0

FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32

FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43	FY44
$0	$0	$0	$0	$0	$0	$0	$673,429	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$326,050	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$999,479	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$999,479	$0	$0	$0	$0

FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43	FY44

FY45	FY46	FY47	FY48	FY49	FY50	FY51	FY52	FY53	FY54	FY55	FY56
$0	$0	$0	$0	$0	$673,429	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$326,050	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$999,479	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$999,479	$0	$0	$0	$0	$0	$0
FY45	FY46	FY47	FY48	FY49	FY50	FY51	FY52	FY53	FY54	FY55	FY56

FY57	FY58	FY59	FY60	FY61	FY62	FY63	FY64	FY65	FY66	FY67	FY68
$0	$0	$0	$673,429	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$326,050	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$999,479	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$999,479	$0	$0	$0	$0	$0	$0	$0	$0
FY57	FY58	FY59	FY60	FY61	FY62	FY63	FY64	FY65	FY66	FY67	FY68

FY69	FY70	FY71	FY72	FY73	FY74	Subtotal 74 Years
						$0
$0	$673,429	$0	$0	$0	$0	$5,387,432
$0	$0	$0	$0	$0	$0	$2,198,955
$0	$326,050	$0	$0	$0	$0	$2,608,400
						$0
$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$2,198,955
$0	$999,479	$0	$0	$0	$0	$7,995,832
$0	$0	$0	$0	$0	$0	$0
$0	$999,479	$0	$0	$0	$0	$10,194,787
FY69	FY70	FY71	FY72	FY73	FY74	74 Years

Upland 4 a.b.c.d

Dredging 50T CuY Confl.Upland#29
DMMS Dredging
of Snake & Clearwater Rivers
with Upland Disposal

Designed By: Walla Walla District COE
Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch
Kim Callan, Chief

Preparation Date: 05/28/99
Effective Date of Pricing: 05/01/99
Est Construction Time: 60 Days

Sales Tax: 7.90%

Project Description:
The Snake River dredging areas are assumed to extend from the vicinity of Silcott Island near Snake River Mile 131 upstream to the State Highway 12 bridge upstream of the confluence of the Snake and Clearwater Rivers, located near Snake River Mile 139.5. The Clearwater River dredging areas are assumed to extend from the Snake River confluence upstream to the Port of Lewiston, from Clearwater River Mile 0.00 to Clearwater River Mile 1.66.
All material assumed to be disposed of utilizing a Disposal Area at Joso near river mile 56. The Disposal Area is assumed adequate to contain all materials dredged.

Basis of Design:
Planning level estimate produced utilizing the MICRO Computer Aided Cost Estimating Program (MCACES) and the Cost Engineering Dredge Estimating Program (CEDEP)

Overtime:
Overtime is anticipated. The Government Estimate is based on an 8 hour operation. Work shall be conducted on a 8 hr/day, 1-8 hour shift/day, 6 days/week.

Construction Windows:
Dredging operations will begin on 15 December, and shall not continue after 28 Feb, in any given year, due to the fish window requirements.

Sub Contracting Plan:
No Sub Contracting considered all work to be performed by Prime Contractor.

Site Access:
It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

Construction Methodology:
Common dredging methods using 15cy clamshell dredges, with the use of scows for in-water disposal. Construction of the Disposal Area will occur during the first year. The dredging material will be offloaded from the barges on tot he Disposal Area.

Conditions:
This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

Equipment/Labor Availability & Distance Traveled:
Assume labor will be available within the project location. Equipment Mobilization will be from the Mouth of the Columbia River to the Confluence of the Snake and Clearwater Rivers, approximately 463 River Miles to allow contractors from Portland & Seattle to compete. All equipment is considered owned - no rental equipment condsidered. All equipment other than dredging

plant rates were computed based on the EP 1110-1-8. All equipment other than dredging plant mob and demob costs computed as 5% of direct costs.

Environmental Concerns:
Turbidity monitoring will be required during the dredging operation. Sieve analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

Contingencies:
Total costs include Overhead and Profit. Escalation and contingencies are not included.

Effective dates for:
Labor: General Decision Number WA990001, Modification #1 dated 3/1/99.
Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Historical Dredging Equipment information.

	QUANTITY	UOM	TOTAL DIRECT	FOOH	HOOH	PROF	Misc Ta	BOND	TOTAL COST	UNIT COST
01 SNAKE RIVER DMMS 99										
01.12 NAVIGATION, PORTS & HARBORS										
01.12.06 DREDGING RIVERS										
01.12.06.01 MECH DREDGING, RIVER TO TRANSFER										
01.12.06.01.001- MOB. & DEMOB. AND PREWORK										
01.12.06.01.001-_01AA Mob. & Demob. Excavation Dredges	1.00	JB	249,305	24,931	13,712	25,195	0	4,784	317,926	317926.44
TOTAL MOB. & DEMOB. AND PREWORK	1.00	JB	249,305	24,931	13,712	25,195	0	4,784	317,926	317926.44
01.12.06.01.002- DREDGE, HAUL & OFF-LOAD MATERIAL										
01.12.06.01.002-_02BB Dredging & Haul Mat to Transfer	50000.00	CY	255,000	25,500	14,025	25,771	0	4,893	325,189	6.50
01.12.06.01.002-_02EB Off Loading Barge, W/Clamshell	50000.00	CY	23,771	2,377	1,307	2,402	0	456	30,313	0.61
TOTAL DREDGE, HAUL & OFF-LOAD MATERIAL	50000.00	CY	278,771	27,877	15,332	28,173	0	5,349	355,502	7.11
TOTAL MECH DREDGING, RIVER TO TRANSFER	50000.00	CY	528,076	52,808	29,044	53,369	0	10,133	673,429	13.47
01.12.06.02 TRANSFER MATERIAL TO DISPOSAL										
01.12.06.02.001- HAUL MAT. TO DISPOSAL SITE										
01.12.06.02.001-_02AA Load, Haul, Dump & Compact D-Mat	50000.00	BCY	219,601	32,940	30,305	28,285	0	5,639	316,770	6.34
TOTAL HAUL MAT. TO DISPOSAL SITE	50000.00	CY	219,601	32,940	30,305	28,285	0	5,639	316,770	6.34
01.12.06.02.002- RESTORATION-TRANSFER/DISPL SITES										
01.12.06.02.002-_02AA Transfer Site, Hydro Seeding	0.50	AC	1,500	225	207	193	0	39	2,164	4327.43
01.12.06.02.002-_02BA Load, Haul, Dump &Compact T-Soil	333.00	BCY	1,717	258	237	221	0	44	2,476	7.44
01.12.06.02.002-_02KA Disposal Site, Hydro Seeding	0.50	AC	1,500	225	207	193	0	39	2,164	4327.43
01.12.06.02.002-_02KB Load, Haul, Dump &Compact T-Soil	333.00	BCY	1,717	258	237	221	0	44	2,476	7.44
TOTAL RESTORATION-TRANSFER/DISPL SITES	0.67	AC	6,433	965	888	829	0	165	9,280	13850.89
TOTAL TRANSFER MATERIAL TO DISPOSAL	50000.00	CY	226,035	33,905	31,193	29,113	0	5,804	326,050	6.52
01.12.06.03 DISPOSAL/TRANSFER DEVELOMENT #29										
01.12.06.03.002- RIVER SIDE DIKE & EE BARGE SLIP										

		QUANTITY	UOM	TOTAL DIRECT	FOOH	HOOH	PROF	Misc Ta	BOND	TOTAL COST	UNIT COST
01.12.06.03.002-_02AA	RS Berm, Earthern Fill, L,H,D,&C	5000.00	BCY	24,600	3,690	1,414	2,599	0	375	32,678	6.54
01.12.06.03.002-_02AB	RS Barge Tie-off, Sheet Piling	70000.00	SF	1,354,884	203,233	77,906	143,152	0	20,656	1,799,831	25.71
01.12.06.03.002-_02DB	RS Barge Tie-off,(Wood pole)50@c	380.00	LF	15,096	2,264	868	1,595	0	230	20,054	52.77
01.12.06.03.002-_02KB	RS Exc Uloading Area,W/Clamshell	38890.00	CY	46,796	7,019	2,691	4,944	0	713	62,163	1.60
01.12.06.03.002-_03AB	Barge Tie-off,Piling Anchr-Block	525.00	CY	113,039	16,956	6,500	11,943	0	1,723	150,161	286.02
	TOTAL RIVER SIDE DIKE & EE BARGE SLIP	1750.00	LF	1,554,415	233,162	89,379	164,234	0	23,699	2,064,888	1179.94
01.12.06.03.004-	TRANSFER SITE (EAST END) DIKES										
01.12.06.03.004-_A02A	TRANS Containment Berm, Dike Exc	200.00	CY	508	76	29	54	0	8	675	3.38
01.12.06.03.004-_A02B	TRANSContainment Berm,Geotextile	820.00	SY	2,444	367	141	258	0	37	3,247	3.96
01.12.06.03.004-_A02S	TRANS Containment Berm, Top Soil	270.00	CY	686	103	39	73	0	10	912	3.38
01.12.06.03.004-_A02T	TRANS Containment Berm, Seeding	1.00	ACR	3,500	525	201	370	0	53	4,649	4649.41
01.12.06.03.004-_B02A	TRANS Settling Pond, Dike	420.00	CY	1,068	160	61	113	0	16	1,418	3.38
01.12.06.03.004-_C02A	TRANS Detention Pond, Dike	230.00	CY	585	88	34	62	0	9	777	3.38
01.12.06.03.004-_D02K	TRANS Fence Galv, Posts in Earth	2000.00	LF	16,308	2,446	938	1,723	0	249	21,664	10.83
01.12.06.03.004-_D03A	TRANS Overflow Strs between Pond	2.00	EA	6,249	937	359	660	0	95	8,302	4150.90
	TOTAL TRANSFER SITE (EAST END) DIKES	5150.00	LF	31,349	4,702	1,803	3,312	0	478	41,644	8.09
01.12.06.03.005-	ACCESS ROADS & HAUL ROAD										
01.12.06.03.005-_02AA	Access Road, Clear, Grub & Shape	7500.00	LF	26,753	4,013	1,538	2,827	0	408	35,538	4.74
	TOTAL ACCESS ROADS & HAUL ROAD	1.00	EA	26,753	4,013	1,538	2,827	0	408	35,538	35538.08
01.12.06.03.006-	DISPOSAL SITE DIKES										
01.12.06.03.006-_A02A	DISP Containment Berm, Dike Exc	6700.00	CY	17,033	2,555	979	1,800	0	260	22,626	3.38
01.12.06.03.006-_A02T	DISP Containment Berm, Seeding	4.00	ACR	14,000	2,100	805	1,479	0	213	18,598	4649.41
01.12.06.03.006-_B02A	DISP Settling Pond, Dike	840.00	CY	2,135	320	123	226	0	33	2,837	3.38
01.12.06.03.006-_C02A	DISP Detention Pond, Dike	460.00	CY	1,169	175	67	124	0	18	1,553	3.38
01.12.06.03.006-_D03A	DISP Overflow Strs between Ponds	2.00	EA	8,484	1,273	488	896	0	129	11,271	5635.37
	TOTAL DISPOSAL SITE DIKES	7000.00	LF	42,822	6,423	2,462	4,524	0	653	56,885	8.13
	TOTAL DISPOSAL/TRANSFER DEVELOMENT #29	50000.00	CY	1,655,339	248,301	95,182	174,897	0	25,237	2,198,955	43.98

No errors detected...

* * * END OF ERROR REPORT * * *

No Detailed Estimate...

No Backup Reports...

* * * END TABLE OF CONTENTS * * *

Upland 5 Proration

'PRORATING OF COST Mcnary Pool 32,000 CY on 2 year intervals

Years	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
32,000 cy @ Joso									
Mechanical Dredging, River to Transfer Site (Joso)									
Costs	$471,055	$0	$471,055	$0	$471,055	$0	$471,055	$0	$471,055
Disposal (Joso) Site Development									
Costs	$2,198,955	$0	$0	$0	$0	$0	$0	$0	$0
Transfer Material to Disposal Site (Joso)									
Costs	$211,294	$0	$211,294	$0	$211,294	$0	$211,294	$0	$211,294
	$0	$0	$0	$0	$0	$0	$0	$0	$0
	$0	$0	$0	$0	$0	$0	$0	$0	$0
			$0	$0	$0	$0	$0	$0	$0
	$0	$0	$0	$0	$0	$0	$0	$0	$0
Construction Subtotal	$2,198,955	$0	$0	$0	$0	$0	$0	$0	$0
O,M,R,R,R Subtotal	$682,349	$0	$682,349	$0	$682,349	$0	$682,349	$0	$682,349
	0								
	$0	$0	$0	$0	$0	$0	$0	$0	$0
Totals *$0.00*	$2,881,304	$0	$682,349	$0	$682,349	$0	$682,349	$0	$682,349

| Years | FY01 | FY02 | FY03 | FY04 | FY05 | FY06 | FY07 | FY08 | FY09 |

FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20
$0	$471,055	$0	$471,055	$0	$471,055	$0	$471,055	$0	$471,055	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$211,294	$0	$211,294	$0	$211,294	$0	$211,294	$0	$211,294	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$682,349	$0	$682,349	$0	$682,349	$0	$682,349	$0	$682,349	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$682,349	$0	$682,349	$0	$682,349	$0	$682,349	$0	$682,349	$0

FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20

FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32
$471,055	$0	$471,055	$0	$471,055	$0	$471,055	$0	$471,055	$0	$471,055	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$211,294	$0	$211,294	$0	$211,294	$0	$211,294	$0	$211,294	$0	$211,294	$0
$0											
$0	$0	$0	$0		$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$682,349	$0	$682,349	$0	$682,349	$0	$682,349	$0	$682,349	$0	$682,349	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$682,349	$0	$682,349	$0	$682,349	$0	$682,349	$0	$682,349	$0	$682,349	$0

FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32

FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43	FY44
$471,055	$0	$471,055	$0	$471,055	$0	$471,055	$0	$471,055	$0	$471,055	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$211,294	$0	$211,294	$0	$211,294	$0	$211,294	$0	$211,294	$0	$211,294	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$682,349	$0	$682,349	$0	$682,349	$0	$682,349	$0	$682,349	$0	$682,349	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$682,349	$0	$682,349	$0	$682,349	$0	$682,349	$0	$682,349	$0	$682,349	$0

FY33 FY34 FY35 FY36 FY37 FY38 FY39 FY40 FY41 FY42 FY43 FY44

FY45	FY46	FY47	FY48	FY49	FY50	FY51	FY52	FY53	FY54	FY55	FY56
$471,055	$0	$471,055	$0	$471,055	$0	$471,055	$0	$471,055	$0	$471,055	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$211,294	$0	$211,294	$0	$211,294	$0	$211,294	$0	$211,294	$0	$211,294	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$682,349	$0	$682,349	$0	$682,349	$0	$682,349	$0	$682,349	$0	$682,349	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$682,349	$0	$682,349	$0	$682,349	$0	$682,349	$0	$682,349	$0	$682,349	$0
FY45	FY46	FY47	FY48	FY49	FY50	FY51	FY52	FY53	FY54	FY55	FY56

FY57	FY58	FY59	FY60	FY61	FY62	FY63	FY64	FY65	FY66	FY67	FY68
$471,055	$0	$471,055	$0	$471,055	$0	$471,055	$0	$471,055	$0	$471,055	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$211,294	$0	$211,294	$0	$211,294	$0	$211,294	$0	$211,294	$0	$211,294	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$682,349	$0	$682,349	$0	$682,349	$0	$682,349	$0	$682,349	$0	$682,349	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$682,349	$0	$682,349	$0	$682,349	$0	$682,349	$0	$682,349	$0	$682,349	$0

FY57 FY58 FY59 FY60 FY61 FY62 FY63 FY64 FY65 FY66 FY67 FY68

FY69	FY70	FY71	FY72	FY73	FY74	Subtotal 74 Years
						$0
$471,055	$0	$471,055	$0	$471,055	$0	$17,429,035
$0	$0	$0	$0	$0	$0	$2,198,955
$211,294	$0	$211,294	$0	$211,294	$0	$7,817,878
						$0
$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$2,198,955
$682,349	$0	$682,349	$0	$682,349	$0	$25,246,913
$0	$0	$0	$0	$0	$0	$0
$682,349	$0	$682,349	$0	$682,349	$0	$27,445,868
FY69	FY70	FY71	FY72	FY73	FY74	74 Years

Upland 5.a.b

Dredging 32T CuY Confl.Upland#29
DMMS Dredging
of Snake & Clearwater Rivers
with Upland Disposal

Designed By: Walla Walla District COE
Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch
Kim Callan, Chief

Preparation Date: 05/28/99
Effective Date of Pricing: 05/01/99
Est Construction Time: 60 Days

Sales Tax: 7.90%

Project Description:
The Columbia and Snake Rivers, McNary Pool dredging areas are assumed to extend throughout the vicinity of the Ice Harbor Cut Navigation Channel from Snake River Mile 3 to Snake River Mile 9. All material assumed to be disposed of utilizing a Disposal Areaa at the Joso near Snake River Mile 56. The disposal site is assumed adequate to contain all materials dredged.

Basis of Design:
Planning level estimate produced utilizing the MICRO Computer Aided Cost Estimating System (MCACES) and the Cost Engineering Dredge Estimating Program (CEDEP)

Overtime:
Overtime is anticipated. The Government Estimate is based on a 8 hour operation. Work shall be conducted on a 8 hr/day, 1-8 hour shifts/day, 6 days/week.

Construction Windows:
Dredging operations will begin on 15 December, and shall not continue after 28 Feb, in any given year, due to the fish window requirements.

Sub Contracting Plan:
No Sub Contracting considered all work to be performed by Prime Contractor.

Site Access:
It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

Construction Methodology:
Common dredging methods using 10cy clamshell dredges, with the use of scows for in-water disposal. Construction of the Disposal Area will occur during the first year. The dredging material will be offloaded from the barges on to the Disposal Area.

Conditions:
This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

Equipment/Labor Availability & Distance Traveled:
Assume labor will be available within the project location. Equipment Mobilization will be from the Mouth of the Columbia River to Ice Harbor Lock and Dam, approximately 334 River Miles to allow contractors from Portland & Seattle to compete. All equipment is condisered owned - no rental equipment considered. All equipment other than dredging plant rates were computed based on the EP 1110-1-8. All equipment other than dredging plant mob and demob costs computed as 5% of direct costs.

Environmental Concerns:

Turbidity monitoring will be required during the dredging operation. Sieve analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

Contingencies:
Total costs include Overhead and Profit. Escalation and contingencies are not included.

Effective dates for:
Labor: General Decision Number WA990001, Modification #1 dated 3/1/99.
Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Historical Dredging Equipment information.

	QUANTITY	UOM	TOTAL DIRECT	FOOH	HOOH	PROF	Misc Ta	BOND	TOTAL COST	UNIT COST
01 SNAKE RIVER DMMS 99										
01.12 NAVIGATION, PORTS & HARBORS										
01.12.06 DREDGING RIVERS										
01.12.06.01 MECH DREDGING, RIVER TO TRANSFER										
01.12.06.01.001- MOB. & DEMOB. AND PREWORK										
01.12.06.01.001-_01AA Mob. & Demob. Excavation Dredges	1.00	JB	164,631	16,463	9,055	16,638	0	3,548	210,335	210335.15
TOTAL MOB. & DEMOB. AND PREWORK	1.00	JB	164,631	16,463	9,055	16,638	0	3,548	210,335	210335.15
01.12.06.01.002- DREDGE, HAUL & OFF-LOAD MATERIAL										
01.12.06.01.002-_02BB Dredging & Haul Mat to Transfer	32000.00	CY	182,080	18,208	10,014	18,401	0	3,924	232,628	7.27
01.12.06.01.002-_02EB Off Loading Barge, W/Clamshell	32000.00	CY	21,988	2,199	1,209	2,222	0	474	28,092	0.88
TOTAL DREDGE, HAUL & OFF-LOAD MATERIAL	32000.00	CY	204,068	20,407	11,224	20,624	0	4,398	260,720	8.15
TOTAL MECH DREDGING, RIVER TO TRANSFER	32000.00	CY	368,699	36,870	20,278	37,262	0	7,947	471,055	14.72
01.12.06.02 TRANSFER MATERIAL TO DISPOSAL										
01.12.06.02.001- HAUL MAT. TO DISPOSAL SITE										
01.12.06.02.001-_02AA Load, Haul, Dump & Compact D-Mat	32000.00	BCY	140,947	21,142	19,451	18,154	0	3,959	203,653	6.36
TOTAL HAUL MAT. TO DISPOSAL SITE	32000.00	CY	140,947	21,142	19,451	18,154	0	3,959	203,653	6.36
01.12.06.02.002- RESTORATION-TRANSFER/DISPL SITES										
01.12.06.02.002-_02AA Transfer Site, Hydro Seeding	0.50	AC	1,500	225	207	193	0	42	2,167	4334.67
01.12.06.02.002-_02BA Load, Haul, Dump &Compact T-Soil	213.00	BCY	1,144	172	158	147	0	32	1,653	7.76
01.12.06.02.002-_02KA Disposal Site, Hydro Seeding	0.50	AC	1,500	225	207	193	0	42	2,167	4334.67
01.12.06.02.002-_02KB Load, Haul, Dump &Compact T-Soil	213.00	BCY	1,144	172	158	147	0	32	1,653	7.76
TOTAL RESTORATION-TRANSFER/DISPL SITES	0.42	AC	5,288	793	730	681	0	149	7,641	18192.92
TOTAL TRANSFER MATERIAL TO DISPOSAL	32000.00	CY	146,236	21,935	20,181	18,835	0	4,108	211,294	6.60
01.12.06.03 DISPOSAL/TRANSFER DEVELOMENT #29										
01.12.06.03.001- RIVER SIDE DIKE & WE BARGE SLIP										

		QUANTITY	UOM	TOTAL DIRECT	FOOH	HOOH	PROF	Misc Ta	BOND	TOTAL COST	UNIT COST
01.12.06.03.001-_02AA	RS Berm, Earthern Fill, L,H,D,&C	5000.00	BCY	24,600	3,690	1,414	2,599	0	375	32,678	6.54
01.12.06.03.001-_02AB	RS Barge Tie-off, Sheet Piling	70000.00	SF	1,354,884	203,233	77,906	143,152	0	20,656	1,799,831	25.71
01.12.06.03.001-_02DB	RS Barge Tie-off,(Wood pole)500c	380.00	LF	15,096	2,264	868	1,595	0	230	20,054	52.77
01.12.06.03.001-_02KB	RS Exc ULoading Area,W/Clamshell	38890.00	CY	46,796	7,019	2,691	4,944	0	713	62,163	1.60
01.12.06.03.001-_03AB	Barge Tie-off,Piling Anchr-Block	525.00	CY	113,039	16,956	6,500	11,943	0	1,723	150,161	286.02
	TOTAL RIVER SIDE DIKE & WE BARGE SLIP	1750.00	LF	1,554,415	233,162	89,379	164,234	0	23,699	2,064,888	1179.94
01.12.06.03.003-	TRANSFER SITE (WEST END) DIKES										
01.12.06.03.003-_A02A	TRANS Containment Berm, Dike Exc	200.00	CY	508	76	29	54	0	8	675	3.38
01.12.06.03.003-_A02B	TRANSContainment Berm,Geotextile	820.00	SY	2,444	367	141	258	0	37	3,247	3.96
01.12.06.03.003-_A02S	TRANS Containment Berm, Top Soil	270.00	CY	686	103	39	73	0	10	912	3.38
01.12.06.03.003-_A02T	TRANS Containment Berm, Seeding	1.00	ACR	3,500	525	201	370	0	53	4,649	4649.41
01.12.06.03.003-_B02A	TRANS Settling Pond, Dike	420.00	CY	1,068	160	61	113	0	16	1,418	3.38
01.12.06.03.003-_C02A	TRANS Detention Pond, Dike	230.00	CY	585	88	34	62	0	9	777	3.38
01.12.06.03.003-_D02K	TRANS Fence Galv, Posts in Earth	2000.00	LF	16,308	2,446	938	1,723	0	249	21,664	10.83
01.12.06.03.003-_D03A	TRANS Overflow Strs between Pond	2.00	EA	6,249	937	359	660	0	95	8,302	4150.90
	TOTAL TRANSFER SITE (WEST END) DIKES	5150.00	LF	31,349	4,702	1,803	3,312	0	478	41,644	8.09
01.12.06.03.005-	ACCESS ROADS & HAUL ROAD										
01.12.06.03.005-_02AA	Access Road, Clear, Grub & Shape	7500.00	LF	26,753	4,013	1,538	2,827	0	408	35,538	4.74
	TOTAL ACCESS ROADS & HAUL ROAD	1.00	EA	26,753	4,013	1,538	2,827	0	408	35,538	35538.08
01.12.06.03.006-	DISPOSAL SITE DIKES										
01.12.06.03.006-_A02A	DISP Containment Berm, Dike Exc	6700.00	CY	17,033	2,555	979	1,800	0	260	22,626	3.38
01.12.06.03.006-_A02T	DISP Containment Berm, Seeding	4.00	ACR	14,000	2,100	805	1,479	0	213	18,598	4649.41
01.12.06.03.006-_B02A	DISP Settling Pond, Dike	840.00	CY	2,135	320	123	226	0	33	2,837	3.38
01.12.06.03.006-_C02A	DISP Detention Pond, Dike	460.00	CY	1,169	175	67	124	0	18	1,553	3.38
01.12.06.03.006-_D03A	DISP Overflow Strs between Ponds	2.00	EA	8,484	1,273	488	896	0	129	11,271	5635.37
	TOTAL DISPOSAL SITE DIKES	7000.00	LF	42,822	6,423	2,462	4,524	0	653	56,885	8.13
	TOTAL DISPOSAL/TRANSFER DEVELOPMENT #29	32000.00	CY	1,655,339	248,301	95,182	174,897	0	25,237	2,198,955	68.72

No errors detected...

* * * END OF ERROR REPORT * * *

No Detailed Estimate...

No Backup Reports...

* * * END TABLE OF CONTENTS * * *

Upland 6 Proration

'PRORATING OF COST Ice Harbor Pool 2,000 CY on 2 year intervals

Years	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
2,000 cy @ Joso									
Mechanical Dredging, River to Transfer Site (Joso)									
Costs	$182,346	$0	$182,346	$0	$182,346	$0	$182,346	$0	$182,346
Disposal (Joso) Site Development									
Costs	n/a	$0	$0	$0	$0	$0	$0	$0	$0
Transfer Material to Disposal Site (Joso)									
Costs	$21,146	$0	$21,146	$0	$21,146	$0	$21,146	$0	$21,146
	$0	$0	$0	$0	$0	$0	$0	$0	$0
	$0	$0	$0	$0	$0	$0	$0	$0	$0
			$0	$0	$0	$0	$0	$0	$0
	$0	$0	$0	$0	$0	$0	$0	$0	$0
Construction Subtotal	$0	$0	$0	$0	$0	$0	$0	$0	$0
O,M,R,R,R Subtotal	$203,492	$0	$203,492	$0	$203,492	$0	$203,492	$0	$203,492
	0								
	$0	$0	$0	$0	$0	$0	$0	$0	$0
Totals *$0.00*	$203,492	$0	$203,492	$0	$203,492	$0	$203,492	$0	$203,492

Years	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09

FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20
$0	$182,346	$0	$182,346	$0	$182,346	$0	$182,346	$0	$182,346	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$21,146	$0	$21,146	$0	$21,146	$0	$21,146	$0	$21,146	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$203,492	$0	$203,492	$0	$203,492	$0	$203,492	$0	$203,492	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$203,492	$0	$203,492	$0	$203,492	$0	$203,492	$0	$203,492	$0

FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20

FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32
$182,346	$0	$182,346	$0	$182,346	$0	$182,346	$0	$182,346	$0	$182,346	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$21,146	$0	$21,146	$0	$21,146	$0	$21,146	$0	$21,146	$0	$21,146	$0
$0											
$0	$0	$0	$0		$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$203,492	$0	$203,492	$0	$203,492	$0	$203,492	$0	$203,492	$0	$203,492	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$203,492	$0	$203,492	$0	$203,492	$0	$203,492	$0	$203,492	$0	$203,492	$0

FY21 FY22 FY23 FY24 FY25 FY26 FY27 FY28 FY29 FY30 FY31 FY32

FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43	FY44
$182,346	$0	$182,346	$0	$182,346	$0	$182,346	$0	$182,346	$0	$182,346	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$21,146	$0	$21,146	$0	$21,146	$0	$21,146	$0	$21,146	$0	$21,146	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$203,492	$0	$203,492	$0	$203,492	$0	$203,492	$0	$203,492	$0	$203,492	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$203,492	$0	$203,492	$0	$203,492	$0	$203,492	$0	$203,492	$0	$203,492	$0
FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43	FY44

FY45	FY46	FY47	FY48	FY49	FY50	FY51	FY52	FY53	FY54	FY55	FY56
$182,346	$0	$182,346	$0	$182,346	$0	$182,346	$0	$182,346	$0	$182,346	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$21,146	$0	$21,146	$0	$21,146	$0	$21,146	$0	$21,146	$0	$21,146	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$203,492	$0	$203,492	$0	$203,492	$0	$203,492	$0	$203,492	$0	$203,492	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$203,492	$0	$203,492	$0	$203,492	$0	$203,492	$0	$203,492	$0	$203,492	$0
FY45	FY46	FY47	FY48	FY49	FY50	FY51	FY52	FY53	FY54	FY55	FY56

FY57	FY58	FY59	FY60	FY61	FY62	FY63	FY64	FY65	FY66	FY67	FY68
$182,346	$0	$182,346	$0	$182,346	$0	$182,346	$0	$182,346	$0	$182,346	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$21,146	$0	$21,146	$0	$21,146	$0	$21,146	$0	$21,146	$0	$21,146	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$203,492	$0	$203,492	$0	$203,492	$0	$203,492	$0	$203,492	$0	$203,492	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$203,492	$0	$203,492	$0	$203,492	$0	$203,492	$0	$203,492	$0	$203,492	$0

FY57	FY58	FY59	FY60	FY61	FY62	FY63	FY64	FY65	FY66	FY67	FY68

FY69	FY70	FY71	FY72	FY73	FY74	Subtotal 74 Years
						$0
$182,346	$0	$182,346	$0	$182,346	$0	$6,746,802
$0	$0	$0	$0	$0	$0	$0
$21,146	$0	$21,146	$0	$21,146	$0	$782,402
						$0
$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0
$203,492	$0	$203,492	$0	$203,492	$0	$7,529,204
$0	$0	$0	$0	$0	$0	$0
$203,492	$0	$203,492	$0	$203,492	$0	$7,529,204
FY69	FY70	FY71	FY72	FY73	FY74	74 Years

Upland 6.a

DredgingI 2T CuY Conf1.Upland#29
DMMS Dredging
of Snake & Clearwater Rivers
with Upland Disposal

Designed By: Walla Walla District COE
Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch
Kim Callan, Chief

Preparation Date: 05/28/99
Effective Date of Pricing: 05/01/99
Est Construction Time: 60 Days

Sales Tax: 7.90%

Project Description:
The Snake River, Ice Harbor Pool dredging area is located downstream of Lower Monumental Dam. All material assumed to be disposed of utilizing a Disposal Area at Joso near Snake River Mile 56. The disposal site is assumed adequate to contain all materials dredged.

Basis of Design:
Planning level estimate produced utilizing the MICRO Computer Aided Cost Estimating Program (MCACES) and the Cost Engineering Dredge Estimating Program (CEDEP)

Overtime:
Overtime is anticipated. The Government Estimate is based on a 24 hour operation. Work shall be conducted on a 8 hr/day, 1-8 hour shifts/day, 5 days/week.

Construction Windows:
Dredging operations will begin on 15 December, and shall not continue after 28 Feb, in any given year, due to the fish window requirements.

Sub Contracting Plan:
No Sub Contracting considered all work to be performed by Prime Contractor.

Site Access:
It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

Construction Methodology:
Common dredging methods using 10cy clamshell dredges, with the use of scows for in-water disposal. The dredging material will be offloaded from the barges on to the Disposal Area.

Conditions:
This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

Equipment/Labor Availability & Distance Traveled:
Assume labor will be available within the project location. Equipment Mobilization will be from the Mouth of the Columbia River to Lower Monumental Lock and Dam, approximately 365 River Miles to allow contractors from Portland & Seattle to compete. All equipment is considered owned - no rental equipment considered. All equipment other than dredging plant rates were computed based onthe EP 1110-1-8. All equipment other than dredging plant mob and demob costs computed as 5% of direct costs.

Environmental Concerns:
Turbidity monitoring will be required during the dredging operation. Sieve analysis testing for course grained and fine grained materials will be

required for determining location of disposal area to use. No overflow will be allowed.

Contingencies:
Total costs include Overhead and Profit. Escalation and contingencies are not included.

Effective dates for:
Labor: General Decision Number WA990001, Modification #1 dated 3/1/99.
Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Historical Dredging Equipment information.

	QUANTITY	UOM	TOTAL DIRECT	FOOH	HOOH	PROF	Misc Ta	BOND	TOTAL COST	UNIT COST
01 SNAKE RIVER DMMS 99										
01.12 NAVIGATION, PORTS & HARBORS										
01.12.06 DREDGING RIVERS										
01.12.06.01 MECH DREDGING, RIVER TO TRANSFER										
01.12.06.01.001- MOB. & DEMOB. AND PREWORK										
01.12.06.01.001-_01AA Mob. & Demob. Excavation Dredges	1.00	JB	119,743	11,974	6,586	12,102	0	3,098	153,503	153502.59
TOTAL MOB. & DEMOB. AND PREWORK	1.00	JB	119,743	11,974	6,586	12,102	0	3,098	153,503	153502.59
01.12.06.01.002- DREDGE, HAUL & OFF-LOAD MATERIAL										
01.12.06.01.002-_02BB Dredging & Haul Mat to Transfer	2000.00	CY	17,700	1,770	974	1,789	0	458	22,690	11.35
01.12.06.01.002-_02EB Off Loading Barge, W/Clamshell	2000.00	CY	4,800	480	264	485	0	124	6,153	3.08
TOTAL DREDGE, HAUL & OFF-LOAD MATERIAL	2000.00	CY	22,500	2,250	1,237	2,274	0	582	28,843	14.42
TOTAL MECH DREDGING, RIVER TO TRANSFER	2000.00	CY	142,243	14,224	7,823	14,375	0	3,680	182,346	91.17
01.12.06.02 TRANSFER MATERIAL TO DISPOSAL										
01.12.06.02.001- HAUL MAT. TO DISPOSAL SITE										
01.12.06.02.001-_02AA Load, Haul, Dump & Compact D-Mat	2000.00	BCY	10,068	1,510	1,389	1,297	0	357	14,620	7.31
TOTAL HAUL MAT. TO DISPOSAL SITE	2000.00	CY	10,068	1,510	1,389	1,297	0	357	14,620	7.31
01.12.06.02.002- RESTORATION-TRANSFER/DISPL SITES										
01.12.06.02.002-_02AA Transfer Site, Hydro Seeding	0.50	AC	1,500	225	207	193	0	53	2,178	4356.66
01.12.06.02.002-_02BA Load, Haul, Dump &Compact T-Soil	13.00	BCY	747	112	103	96	0	26	1,084	83.41
01.12.06.02.002-_02KA Disposal Site, Hydro Seeding	0.50	AC	1,500	225	207	193	0	53	2,178	4356.66
01.12.06.02.002-_02KB Load, Haul, Dump &Compact T-Soil	13.00	BCY	747	112	103	96	0	26	1,084	83.41
TOTAL RESTORATION-TRANSFER/DISPL SITES	0.05	AC	4,493	674	620	579	0	159	6,525	130505.55
TOTAL TRANSFER MATERIAL TO DISPOSAL	2000.00	CY	14,561	2,184	2,009	1,875	0	516	21,146	10.57

No errors detected...

* * * END OF ERROR REPORT * * *

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* * * END TABLE OF CONTENTS * * *

Upland 7 Proration

'PRORATING OF COST Lower Monumental Pool 2,000 CY on 2 year intervals

Years	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
2,000 cy @ Joso									
Mechanical Dredging, River to Transfer Site (Joso)									
Costs	$186,480	$0	$186,480	$0	$186,480	$0	$186,480	$0	$186,480
Disposal (Joso) Site Development									
Costs	n/a	$0	$0	$0	$0	$0	$0	$0	$0
Transfer Material to Disposal Site (Joso)									
Costs	$21,146	$0	$21,146	$0	$21,146	$0	$21,146	$0	$21,146
	$0	$0	$0	$0	$0	$0	$0	$0	$0
	$0	$0	$0	$0	$0	$0	$0	$0	$0
			$0	$0	$0	$0	$0	$0	$0
	$0	$0	$0	$0	$0	$0	$0	$0	$0
Construction Subtotal	$0	$0	$0	$0	$0	$0	$0	$0	$0
O,M,R,R,R Subtotal	$207,626	$0	$207,626	$0	$207,626	$0	$207,626	$0	$207,626
	0								
	$0	$0	$0	$0	$0	$0	$0	$0	$0
Totals *$0.00*	$207,626	$0	$207,626	$0	$207,626	$0	$207,626	$0	$207,626

Years	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09

FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20
$0	$186,480	$0	$186,480	$0	$186,480	$0	$186,480	$0	$186,480	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$21,146	$0	$21,146	$0	$21,146	$0	$21,146	$0	$21,146	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$207,626	$0	$207,626	$0	$207,626	$0	$207,626	$0	$207,626	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$207,626	$0	$207,626	$0	$207,626	$0	$207,626	$0	$207,626	$0

FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20

FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32
$186,480	$0	$186,480	$0	$186,480	$0	$186,480	$0	$186,480	$0	$186,480	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$21,146	$0	$21,146	$0	$21,146	$0	$21,146	$0	$21,146	$0	$21,146	$0
$0											
$0	$0	$0	$0		$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$207,626	$0	$207,626	$0	$207,626	$0	$207,626	$0	$207,626	$0	$207,626	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$207,626	$0	$207,626	$0	$207,626	$0	$207,626	$0	$207,626	$0	$207,626	$0

FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32

FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43	FY44
$186,480	$0	$186,480	$0	$186,480	$0	$186,480	$0	$186,480	$0	$186,480	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$21,146	$0	$21,146	$0	$21,146	$0	$21,146	$0	$21,146	$0	$21,146	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$207,626	$0	$207,626	$0	$207,626	$0	$207,626	$0	$207,626	$0	$207,626	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$207,626	$0	$207,626	$0	$207,626	$0	$207,626	$0	$207,626	$0	$207,626	$0

FY33 FY34 FY35 FY36 FY37 FY38 FY39 FY40 FY41 FY42 FY43 FY44

FY45	FY46	FY47	FY48	FY49	FY50	FY51	FY52	FY53	FY54	FY55	FY56
$186,480	$0	$186,480	$0	$186,480	$0	$186,480	$0	$186,480	$0	$186,480	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$21,146	$0	$21,146	$0	$21,146	$0	$21,146	$0	$21,146	$0	$21,146	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$207,626	$0	$207,626	$0	$207,626	$0	$207,626	$0	$207,626	$0	$207,626	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$207,626	$0	$207,626	$0	$207,626	$0	$207,626	$0	$207,626	$0	$207,626	$0
FY45	FY46	FY47	FY48	FY49	FY50	FY51	FY52	FY53	FY54	FY55	FY56

FY57	FY58	FY59	FY60	FY61	FY62	FY63	FY64	FY65	FY66	FY67	FY68
$186,480	$0	$186,480	$0	$186,480	$0	$186,480	$0	$186,480	$0	$186,480	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$21,146	$0	$21,146	$0	$21,146	$0	$21,146	$0	$21,146	$0	$21,146	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$207,626	$0	$207,626	$0	$207,626	$0	$207,626	$0	$207,626	$0	$207,626	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$207,626	$0	$207,626	$0	$207,626	$0	$207,626	$0	$207,626	$0	$207,626	$0

FY57	FY58	FY59	FY60	FY61	FY62	FY63	FY64	FY65	FY66	FY67	FY68

FY69	FY70	FY71	FY72	FY73	FY74	Subtotal 74 Years
						$0
$186,480	$0	$186,480	$0	$186,480	$0	$6,899,760
$0	$0	$0	$0	$0	$0	$0
$21,146	$0	$21,146	$0	$21,146	$0	$782,402
						$0
$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0
$207,626	$0	$207,626	$0	$207,626	$0	$7,682,162
$0	$0	$0	$0	$0	$0	$0
$207,626	$0	$207,626	$0	$207,626	$0	$7,682,162
FY69	FY70	FY71	FY72	FY73	FY74	74 Years

Upland 7.a

DredgingM 2T CuY Confl.Upland#29
DMMS Dredging
of Snake & Clearwater Rivers
with Upland Disposal

Designed By: Walla Walla District COE
Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch
Kim Callan, Chief

Preparation Date: 05/28/99
Effective Date of Pricing: 05/01/99
Est Construction Time: 60 Days

Sales Tax: 7.90%

Currency in DOLLARS

LABOR ID: NAT99A EQUIP ID: NAT97C CREW ID: NAT99A UPB ID: UP99EA

Project Description:
The Snake River, Lower Monumental Pool dredging area is located downstream of Little Goose Dam and near the confluence of the Palouse and Snake River confluence. All material assumed to be disposed of utilizing a Disposal Area at Joso near Snake River Mile 56. The disposal site is assumed adequate to contain all materials dredged.

Basis of Design:
Planning level estimate produced utilizing the MICRO Computer Aided Cost Estimating Program (MCACES) and the Cost Engineering Dredge Estimating Program (CEDEP)

Overtime:
Overtime is anticipated. The Government Estimate is based on a 24 hour operation. Work shall be conducted on an 8 hr/day, 1-8 hour shift/day, 5 days/week.

Construction Windows:
Dredging operations will begin on 15 December, and shall not continue after 28 Feb, in any given year, due to the fish window requirements.

Sub Contracting Plan:
No Sub Contracting considered all work to be performed by Prime Contractor.

Site Access:
It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

Construction Methodology:
Common dredging methods using 10cy clamshell dredges, with the use of scows for in-water disposal. The dredging material will be offloaded from the barges on to the Disposal Area.

Conditions:
This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

Equipment/Labor Availability & Distance Traveled:
Assume labor will be available within the project location. Equipment Mobilization will be from the Mouth of the Columbia River to Little Goose Lock and Dam, approximately 394 River Miles to allow contractors from Portland & Seattle to compete. All equipment is considered owned - no rental equipment considered. All equipment other than dredging plant rates were computed based on the EP 1110-1-8. All equipment other than dredging plant mob and demob costs computed as 5% of direct costs.

Environmental Concerns:
Turbidity monitoring will be required during the dredging operation. Sieve

analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

Contingencies:
Total costs include Overhead and Profit. Escalation and contingencies are not included.

Effective dates for:
Labor: General Decision Number WA990001, Modification #1 dated 3/1/99.
Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Historical Dredging Equipment information.

	QUANTITY	UOM	TOTAL DIRECT	FOOH	HOOH	PROF	Misc Ta	BOND	TOTAL COST	UNIT COST
01 SNAKE RIVER DMMS 99										
01.12 NAVIGATION, PORTS & HARBORS										
01.12.06 DREDGING RIVERS										
01.12.06.01 MECH DREDGING, RIVER TO TRANSFER										
01.12.06.01.001- MOB. & DEMOB. AND PREWORK										
01.12.06.01.001-_01AA Mob. & Demob. Excavation Dredges	1.00	JB	127,546	12,755	7,015	12,890	0	3,280	163,486	163485.53
TOTAL MOB. & DEMOB. AND PREWORK	1.00	JB	127,546	12,755	7,015	12,890	0	3,280	163,486	163485.53
01.12.06.01.002- DREDGE, HAUL & OFF-LOAD MATERIAL										
01.12.06.01.002-_02BB Dredging & Haul Mat to Transfer	2000.00	CY	13,140	1,314	723	1,328	0	338	16,843	8.42
01.12.06.01.002-_02EB Off Loading Barge, W/Clamshell	2000.00	CY	4,800	480	264	485	0	123	6,152	3.08
TOTAL DREDGE, HAUL & OFF-LOAD MATERIAL	2000.00	CY	17,940	1,794	987	1,813	0	461	22,994	11.50
TOTAL MECH DREDGING, RIVER TO TRANSFER	2000.00	CY	145,486	14,549	8,002	14,703	0	3,741	186,480	93.24
01.12.06.02 TRANSFER MATERIAL TO DISPOSAL										
01.12.06.02.001- HAUL MAT. TO DISPOSAL SITE										
01.12.06.02.001-_02AA Load, Haul, Dump & Compact D-Mat	2000.00	BCY	10,068	1,510	1,389	1,297	0	357	14,620	7.31
TOTAL HAUL MAT. TO DISPOSAL SITE	2000.00	CY	10,068	1,510	1,389	1,297	0	357	14,620	7.31
01.12.06.02.002- RESTORATION-TRANSFER/DISPL SITES										
01.12.06.02.002-_02AA Transfer Site, Hydro Seeding	0.50	AC	1,500	225	207	193	0	53	2,178	4356.66
01.12.06.02.002-_02BA Load, Haul, Dump &Compact T-Soil	13.00	BCY	747	112	103	96	0	26	1,084	83.41
01.12.06.02.002-_02KA Disposal Site, Hydro Seeding	0.50	AC	1,500	225	207	193	0	53	2,178	4356.66
01.12.06.02.002-_02KB Load, Haul, Dump &Compact T-Soil	13.00	BCY	747	112	103	96	0	26	1,084	83.41
TOTAL RESTORATION-TRANSFER/DISPL SITES	0.05	AC	4,493	674	620	579	0	159	6,525	130505.55
TOTAL TRANSFER MATERIAL TO DISPOSAL	2000.00	CY	14,561	2,184	2,009	1,875	0	516	21,146	10.57

No errors detected...

* * * END OF ERROR REPORT * * *

Tri-Service Automated Cost Engineering System (TRACES)
PROJECT DMMRM2: DredgingM 2T CuY Confl.Upland#29 - DMMS Dredging
PLANNING ESTIMATE - 2,000 CY OF DREDGE MATERIAL

No Detailed Estimate...

No Backup Reports...

* * * END TABLE OF CONTENTS * * *

Upland 8 Proration

'PRORATING OF COST Little Goose Pool 4,000 CY on 2 year intervals

Years	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
4,000 cy @ Joso									
Mechanical Dredging, River to Transfer Site (Joso)									
Costs	$207,318	$0	$207,318	$0	$207,318	$0	$207,318	$0	$207,318
Disposal (Joso) Site Development									
Costs	n/a	$0	$0	$0	$0	$0	$0	$0	$0
Transfer Material to Disposal Site (Joso)									
Costs	$35,766	$0	$35,766	$0	$35,766	$0	$35,766	$0	$35,766
	$0	$0	$0	$0	$0	$0	$0	$0	$0
	$0	$0	$0	$0	$0	$0	$0	$0	$0
			$0	$0	$0	$0	$0	$0	$0
	$0	$0	$0	$0	$0	$0	$0	$0	$0
Construction Subtotal	$0	$0	$0	$0	$0	$0	$0	$0	$0
O,M,R,R,R Subtotal	$243,084	$0	$243,084	$0	$243,084	$0	$243,084	$0	$243,084
	0								
	$0	$0	$0	$0	$0	$0	$0	$0	$0
Totals *$0.00*	$243,084	$0	$243,084	$0	$243,084	$0	$243,084	$0	$243,084

| Years | FY01 | FY02 | FY03 | FY04 | FY05 | FY06 | FY07 | FY08 | FY09 |

FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20
$0	$207,318	$0	$207,318	$0	$207,318	$0	$207,318	$0	$207,318	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$35,766	$0	$35,766	$0	$35,766	$0	$35,766	$0	$35,766	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$243,084	$0	$243,084	$0	$243,084	$0	$243,084	$0	$243,084	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$243,084	$0	$243,084	$0	$243,084	$0	$243,084	$0	$243,084	$0

FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20

FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32
$207,318	$0	$207,318	$0	$207,318	$0	$207,318	$0	$207,318	$0	$207,318	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$35,766	$0	$35,766	$0	$35,766	$0	$35,766	$0	$35,766	$0	$35,766	$0
$0											
$0	$0	$0	$0		$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$243,084	$0	$243,084	$0	$243,084	$0	$243,084	$0	$243,084	$0	$243,084	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$243,084	$0	$243,084	$0	$243,084	$0	$243,084	$0	$243,084	$0	$243,084	$0

FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32

FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43	FY44
$207,318	$0	$207,318	$0	$207,318	$0	$207,318	$0	$207,318	$0	$207,318	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$35,766	$0	$35,766	$0	$35,766	$0	$35,766	$0	$35,766	$0	$35,766	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$243,084	$0	$243,084	$0	$243,084	$0	$243,084	$0	$243,084	$0	$243,084	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$243,084	$0	$243,084	$0	$243,084	$0	$243,084	$0	$243,084	$0	$243,084	$0

FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43	FY44

FY45	FY46	FY47	FY48	FY49	FY50	FY51	FY52	FY53	FY54	FY55	FY56
$207,318	$0	$207,318	$0	$207,318	$0	$207,318	$0	$207,318	$0	$207,318	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$35,766	$0	$35,766	$0	$35,766	$0	$35,766	$0	$35,766	$0	$35,766	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$243,084	$0	$243,084	$0	$243,084	$0	$243,084	$0	$243,084	$0	$243,084	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$243,084	$0	$243,084	$0	$243,084	$0	$243,084	$0	$243,084	$0	$243,084	$0

FY45	FY46	FY47	FY48	FY49	FY50	FY51	FY52	FY53	FY54	FY55	FY56

FY57	FY58	FY59	FY60	FY61	FY62	FY63	FY64	FY65	FY66	FY67	FY68
$207,318	$0	$207,318	$0	$207,318	$0	$207,318	$0	$207,318	$0	$207,318	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$35,766	$0	$35,766	$0	$35,766	$0	$35,766	$0	$35,766	$0	$35,766	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$243,084	$0	$243,084	$0	$243,084	$0	$243,084	$0	$243,084	$0	$243,084	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$243,084	$0	$243,084	$0	$243,084	$0	$243,084	$0	$243,084	$0	$243,084	$0

FY57	FY58	FY59	FY60	FY61	FY62	FY63	FY64	FY65	FY66	FY67	FY68

FY69	FY70	FY71	FY72	FY73	FY74	Subtotal 74 Years
						$0
$207,318	$0	$207,318	$0	$207,318	$0	$7,670,766
$0	$0	$0	$0	$0	$0	$0
$35,766	$0	$35,766	$0	$35,766	$0	$1,323,342
						$0
$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0
$243,084	$0	$243,084	$0	$243,084	$0	$8,994,108
$0	$0	$0	$0	$0	$0	$0
$243,084	$0	$243,084	$0	$243,084	$0	$8,994,108
FY69	FY70	FY71	FY72	FY73	FY74	74 Years

Upland 8.a

DredgingG 4T CuY Confl.Upland#29
DMMS Dredging
of Snake & Clearwater Rivers
with Upland Disposal

Designed By: Walla Walla District COE
Estimated By: R. Hynek and J. Davin

Prepared By: Cost Engineering Branch
Kim Callan, Chief

Preparation Date: 05/28/99
Effective Date of Pricing: 05/01/99
Est Construction Time: 60 Days

Sales Tax: 7.90%

Project Description:
The Snake River, Little Goose Pool dredging area is located downstream of Lower Granite Dam and at Schultz Bar located near Snake River Mile 100. All material assumed to be disposed of utilizing a Disposal Area at Joso near Snake River Mile 56. The disposal site is assumed adequate to contain all materials dredged.

Basis of Design:
Planning level estimate produced utilizing the MICRO Computer Aided Cost Estimating System (MCACES) and the Cost Engineering Dredge Estimating Program (CEDEP)

Overtime:
Overtime is anticipated. The Government Estimate is based on a 24 hour operation. Work shall be conducted on a 8 hr/day, 1-8 hour shift/day, 5 days/week.

Construction Windows:
Dredging operations will begin on 15 December, and shall not continue after 28 Feb, in any given year, due to the fish window requirements.

Sub Contracting Plan:
No Sub Contracting considered all work to be performed by Prime Contractor.

Site Access:
It is assumed all Disposal Transfer Sites & the In-water Disposal sites are accessible without further dredging requirements.

Construction Methodology:
Common dredging methods using 10cy clamshell dredges, with the use of scows for in-water disposal. The dredging material will be offloaded from the barges on to the Disposal Area.

Conditions:
This work will take place during winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

Equipment/Labor Availability & Distance Traveled:
Assume labor will be available within the project location. Equipment Mobilization will be from the Mouth of the Columbia River to Lower Granite Lock and Dam, approximately 431 River Miles to allow contractors from Portland & Seattle to compete. All equipment is considered owned - no rental equipment considered. All equipment other than dredging plant rates were computed based on the EP 1110-1-8. All equipment other than dredging plant mob and demob costs computed as 5% of direct costs.

Environmental Concerns:
Turbidity monitoring will be required during the dredging operation. Sieve

analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

Contingencies:
Total costs include Overhead and Profit. Escalation and contingencies are not included.

Effective dates for:
Labor: General Decision Number WA990001, Modification #1 dated 3/1/99.
Equipment: Cost Engineering Dredge Estimating Programs (CEDEP) and Historical Dredging Equipment information.

	QUANTITY UOM	TOTAL DIRECT	FOOH	HOOH	PROF	Misc Ta	BOND	TOTAL COST	UNIT COST
01 SNAKE RIVER DMMS 99									
01.12 NAVIGATION, PORTS & HARBORS									
01.12.06 DREDGING RIVERS									
01.12.06.01 MECH DREDGING, RIVER TO TRANSFER									
01.12.06.01.001- MOB. & DEMOB. AND PREWORK									
01.12.06.01.001-_01AA Mob. & Demob. Excavation Dredges	1.00 JB	133,311	13,331	7,332	13,473	0	3,335	170,782	170782.42
TOTAL MOB. & DEMOB. AND PREWORK	1.00 JB	133,311	13,331	7,332	13,473	0	3,335	170,782	170782.42
01.12.06.01.002- DREDGE, HAUL & OFF-LOAD MATERIAL									
01.12.06.01.002-_02BB Dredging & Haul Mat to Transfer	4000.00 CY	23,720	2,372	1,305	2,397	0	593	30,387	7.60
01.12.06.01.002-_02EB Off Loading Barge, W/Clamshell	4000.00 CY	4,800	480	264	485	0	120	6,149	1.54
TOTAL DREDGE, HAUL & OFF-LOAD MATERIAL	4000.00 CY	28,520	2,852	1,569	2,882	0	714	36,536	9.13
TOTAL MECH DREDGING, RIVER TO TRANSFER	4000.00 CY	161,831	16,183	8,901	16,355	0	4,049	207,318	51.83
01.12.06.02 TRANSFER MATERIAL TO DISPOSAL									
01.12.06.02.001- HAUL MAT. TO DISPOSAL SITE									
01.12.06.02.001-_02AA Load, Haul, Dump & Compact D-Mat	4000.00 BCY	20,135	3,020	2,779	2,593	0	713	29,241	7.31
TOTAL HAUL MAT. TO DISPOSAL SITE	4000.00 CY	20,135	3,020	2,779	2,593	0	713	29,241	7.31
01.12.06.02.002- RESTORATION-TRANSFER/DISPL SITES									
01.12.06.02.002-_02AA Transfer Site, Hydro Seeding	0.50 AC	1,500	225	207	193	0	53	2,178	4356.66
01.12.06.02.002-_02BA Load, Haul, Dump &Compact T-Soil	27.00 BCY	747	112	103	96	0	26	1,084	40.16
01.12.06.02.002-_02KA Disposal Site, Hydro Seeding	0.50 AC	1,500	225	207	193	0	53	2,178	4356.66
01.12.06.02.002-_02KB Load, Haul, Dump &Compact T-Soil	27.00 BCY	747	112	103	96	0	26	1,084	40.16
TOTAL RESTORATION-TRANSFER/DISPL SITES	0.06 AC	4,493	674	620	579	0	159	6,525	108754.63
TOTAL TRANSFER MATERIAL TO DISPOSAL	4000.00 CY	24,629	3,694	3,399	3,172	0	872	35,766	8.94

No errors detected...

* * END OF ERROR REPORT * * *

Upland 9 Proration

'PRORATING OF COST Lower Granite Pool 7,000 CY of marginally contaminated material transported to Joso site ea

Years	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
7,000 cy @ Joso									
Mechanical Dredging, River to Transfer Site (Joso)									
Costs	$0	$0	$0	$0	$115,500	$0	$0	$0	$0
Disposal (Joso) Site Development									
Costs	$0	$0	$0	$0	$11,382,888	$0	$0	$0	$0
Transfer Material to Disposal Site (Joso)									
Costs	$0	$0	$0	$0	$113,750	$0	$0	$0	$0
	$0	$0	$0	$0	$0	$0	$0	$0	$0
	$0	$0	$0	$0	$0	$0	$0	$0	$0
			$0	$0	$0	$0	$0	$0	$0
	$0	$0	$0	$0	$0	$0	$0	$0	$0
Construction Subtotal	$0	$0	$0	$0	$11,382,888	$0	$0	$0	$0
O,M,R,R,R Subtotal	$0	$0	$0	$0	$229,250	$0	$0	$0	$0
	0								
	$0	$0	$0	$0	$0	$0	$0	$0	$0
Totals *$0.00*	$0	$0	$0	$0	$11,612,138	$0	$0	$0	$0

Years	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09

ach confluence dredging operation

FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20
$115,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$115,500
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$113,750	$0	$0	$0	$0	$0	$0	$0	$0	$0	$113,750
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$229,250	$0	$0	$0	$0	$0	$0	$0	$0	$0	$229,250
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$229,250	$0	$0	$0	$0	$0	$0	$0	$0	$0	$229,250

FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20

FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32
$0	$0	$0	$0	$0	$0	$0	$0	$0	$115,500	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$113,750	$0	$0
$0											
$0	$0	$0	$0		$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$229,250	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$229,250	$0	$0

FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32

FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43	FY44
$0	$0	$0	$0	$0	$0	$0	$115,500	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$113,750	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$229,250	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$229,250	$0	$0	$0	$0
FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42	FY43	FY44

FY45	FY46	FY47	FY48	FY49	FY50	FY51	FY52	FY53	FY54	FY55	FY56
$0	$0	$0	$0	$0	$115,500	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$113,750	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$229,250	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$229,250	$0	$0	$0	$0	$0	$0
FY45	FY46	FY47	FY48	FY49	FY50	FY51	FY52	FY53	FY54	FY55	FY56

FY57	FY58	FY59	FY60	FY61	FY62	FY63	FY64	FY65	FY66	FY67	FY68
$0	$0	$0	$115,500	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$113,750	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$229,250	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$229,250	$0	$0	$0	$0	$0	$0	$0	$0

FY57	FY58	FY59	FY60	FY61	FY62	FY63	FY64	FY65	FY66	FY67	FY68

FY69	FY70	FY71	FY72	FY73	FY74	Subtotal 74 Years	
						$0	**Checks**
						---	What the number should be
$0	$115,500	$0	$0	$0	$0	$924,000	-$924,000.00
						---	What the number should be
$0	$0	$0	$0	$0	$0	$11,382,888	-$11,382,888.00

$0	$113,750	$0	$0	$0	$0	$910,000	-$910,000.00
						$0	$0.00
$0	$0	$0	$0	$0	$0	$0	$0.00
$0	$0	$0	$0	$0	$0	$0	$0.00
							$13,216,888.00
$0	$0	$0	$0	$0	$0	$0	$0.00
$0	$0	$0	$0	$0	$0	$11,382,888	
$0	$229,250	$0	$0	$0	$0	$1,834,000	$0.00
$0	$0	$0	$0	$0	$0	$0	$0.00
$0	$229,250	$0	$0	$0	$0	$13,216,888	$0.00
FY69	FY70	FY71	FY72	FY73	FY74	74 Years	

Upland 9.a.b

Dredged Material Management Plan
DMMP Joso Contingency Upland
Disposal Site

Designed By: Walla Walla District COE
Estimated By: Tafedeo Sana

Prepared By: Cost Engineering Branch
Kim Callan, Chief

Preparation Date: 06/11/01
Effective Date of Pricing: 06/11/01
Est Construction Time: 180 Days

Sales Tax: 7.90%

Project Description: The JOSO Dredge Material Disposal Site is located along the southern shore of the Snake River between River Miles 56.5 and 56.8. The Disposal site will consist of two types of material disposal, about 25% of the pit will be lined for contaminated material storage. A barge slip and unloading area will be constructed at the West end of the Joso Site. Landings will be formed on either side of the slip for crane access. Two temporary dredged material storage areas will be developed adjacent to the slip for dewatering. One temporary storage area will be completely lined. A haul road will be developed to transport material from the unloading area/temporary storage to the permanent disposal area.

Basis of Design: Estimate based on preliminary drawings provided by soils/civil branch. Excavation and fill quantities provided by soils/civil branch. Estimate for Sheet Pile and in-water Mooring dolphins based on Port of Benton Modifications Estimate, Revision #4.

Overtime: Overtime is anticipated. The Government Estimate is based on a 8 hour operation. Work shall be conducted on a 8 hr/day, 1-8 hour shifts/day, 6 days/week.

Construction Windows: Most work will be accomplished in dry conditions between July 2002 and November 2002. Remaining work will be in-water and restricted to beginning 1 November 2002 extending through 15 December 2002.

Sub Contracting Plan: The following subcontractors included in the estimate: PD - Pile Driving Subcontractor LS - Landscaping Subcontractor

Site Access: The Joso Disposal Site is Located along the Southern Shore of the Snake River between River Miles 56.5 and 56.8. It is assumed the Site is accessible without further dredging requirements.

Construction Methodology: The construction methodology is standard marine and civil contruction.

Conditions: This work will take place during Summer through Winter months. The anticipated types of soil to be incountered are sand/silts/gravels/cobbles. The use of Clamshells and Scows has been considered, due to the anticipated existence of silt type materials within the Confluence areas. Considerations for delays due to traffic, and coordination efforts have been accounted for within the effective working time. No adverse weather conditions other than normal winter work weather has been assumed.

Equipment/Labor Availability & Distance Traveled: Equipment and Labor is available within a 100-mile radius which includes the cities of Richland, Pasco, Kennewick, Washington. Marine floating plant for dolphin construction is available from the Portland, Oregon and Vancouver, Washington area, approximately 275 miles distance.

Environmental Concerns: Turbidity monitoring will be required during the dredging operation. Sieve analysis testing for course grained and fine grained materials will be required for determining location of disposal area to use. No overflow will be allowed.

Contingencies: No Contingency

Profit: 9.26% profit developed using the weighted guidelines method.

Effective dates for:
Labor: General Decision Number WA990001, Modification #1 dated 3/1/99.
Equipment: NAT99A - EP 1110 - region 8, Jun99
99 Labor and Equipment Rates used as Requested by Project Manager Jack Sands
to correspond with other estimates developed for DMMP/EIS.
crews: USNBEN - Nat'l crews database-A - eff. Jan96
UPB: UP99EA Nat'l UPB eff. Jan99

		QUANTITY	UOM	TOTAL DIRECT	FOOH	HOOH	PROF	Misc Ta	BOND	TOTAL COST	UNIT COST
AA	SNAKE RIVER DMMP										
AA.12	NAVIGATION PORTS AND HARBORS										
AA.12.01	UPLAND DISPOSAL SITE										
AA.12.01.01	JOSO SITE DEVELOPEMENT										
AA.12.01.01.001A	MOBILIZATION AND DEMOBILIZATION	1.00	EA	148,806	14,881	8,184	15,915	0	1,533	189,319	189319.22
AA.12.01.01.003A	BARGE SLIP EXCAV & GRAVEL FILL	1.00	JOB	128,532	12,853	7,069	13,747	0	1,352	163,553	163553.23
AA.12.01.01.003B	CHANNEL DREDGING	9000.00	CY	74,919	7,492	4,121	8,013	0	788	95,332	10.59
AA.12.01.01.003C	IN-WATER STRUCTURES (DOLPHINS)	2.00	EA	115,072	11,507	6,329	12,307	0	1,133	146,348	73174.19
AA.12.01.01.004A	UNLOADING AREA EXCAVATION & FILL	1.00	JOB	2,863,429	286,343	157,489	306,252	0	30,122	3,643,635	3643635
AA.12.01.01.004C	CONTAINMENT BERMS	1.00	JOB	645,917	64,592	35,525	69,083	0	6,795	821,912	821912.19
AA.12.01.01.004D	GEOMEMBRANE LINER AND FILL	124560.00	SY	2,756,098	275,610	151,585	294,773	0	28,993	3,507,059	28.16
AA.12.01.01.005A	WHARF STRUCTURAL COMPONENTS	1.00	EA	1,811,116	181,112	99,611	193,704	0	17,833	2,303,377	2303377
AA.12.01.01.007A	HAUL ROAD	6480.00	LF	336,245	33,625	18,493	35,962	0	3,537	427,863	66.03
AA.12.01.01.008A	MISCELLANEOUS SITE WORK	1.00	JOB	65,962	6,596	3,628	7,055	0	1,249	84,489	84488.99
	TOTAL JOSO SITE DEVELOPEMENT	1.00	EA	8,946,096	894,610	492,035	956,812	0	93,335	11,382,888	11382888

		QUANTITY	UOM	MHRS	LAB	EQUIP	MAT	OTHER	TOTAL COST	UNIT COST
AA	SNAKE RIVER DMMP									
AA.12	NAVIGATION PORTS AND HARBORS									
AA.12.01	UPLAND DISPOSAL SITE									
AA.12.01.01	JOSO SITE DEVELOPEMENT									
AA.12.01.01.001A	MOBILIZATION AND DEMOBILIZATION	1.00	EA	1,454	54,611	94,195	0	0	148,806	148806.22
AA.12.01.01.003A	BARGE SLIP EXCAV & GRAVEL FILL	1.00	JOB	2,057	63,429	54,435	10,668	0	128,532	128531.82
AA.12.01.01.003B	CHANNEL DREDGING	9000.00	CY	432	30,631	44,288	0	0	74,919	8.32
AA.12.01.01.003C	IN-WATER STRUCTURES (DOLPHINS)	2.00	EA	569	21,835	42,542	50,695	0	115,072	57535.95
AA.12.01.01.004A	UNLOADING AREA EXCAVATION & FILL	1.00	JOB	10,149	1,342,889	1,502,931	17,609	0	2,863,429	2863429
AA.12.01.01.004C	CONTAINMENT BERMS	1.00	JOB	12,665	397,962	247,955	0	0	645,917	645917.36
AA.12.01.01.004D	GEOMEMBRANE LINER AND FILL	124560.00	SY	24,375	785,975	464,845	1,505,278	0	2,756,098	22.13
AA.12.01.01.005A	WHARF STRUCTURAL COMPONENTS	1.00	EA	8,509	306,175	102,740	1,402,201	0	1,811,116	1811116
AA.12.01.01.007A	HAUL ROAD	6480.00	LF	3,782	168,386	167,859	0	0	336,245	51.89
AA.12.01.01.008A	MISCELLANEOUS SITE WORK	1.00	JOB	400	12,584	5,945	47,433	0	65,962	65961.56
	TOTAL JOSO SITE DEVELOPEMENT	1.00	EA	64,393	3,184,477	2,727,735	3,033,884	0	8,946,096	8946096
	FIELD OFFICE OVERHEAD	10.00	%						894,610	
	SUBTOTAL								9,840,705	
	HOME OFFICE OVERHEAD	5.00	%						492,035	
	SUBTOTAL								10,332,740	
	PROFIT	9.26	%						956,812	
	SUBTOTAL								11,289,552	
	BOND	0.83	%						93,335	
	TOTAL INCL INDIRECTS								11,382,888	

DMMP JOSO DISP. SITE VE STUDY
DMMP Joso Contingency Upland
Disposal Site

Designed By: Walla Walla District COE
Estimated By: Robert Hynek

Prepared By: Cost Engineering Branch
Kim Callan, Chief

Preparation Date: 08/10/01
Effective Date of Pricing: 06/11/01
Est Construction Time: 180 Days

Sales Tax: 7.90%

	QUANTITY	UOM	CONTRACT COST	CONTINGN	ESCALATN	E & D	S & A	TOTAL COST	UNIT COST
AA SNAKE RIVER DMMP									
AA.12 NAVIGATION PORTS AND HARBORS									
AA.12.02 JOSO DISPOSAL & 1st YR. DREDGING									
AA.12.02.02 1st YEAR DREDGING COST									
AA.12.02.02. 1 DREDGING COST	7000.00	CY	115,500	0	0	0	0	115,500	16.50
TOTAL 1st YEAR DREDGING COST	1.00	CY	115,500	0	0	0	0	115,500	115500.00

	QUANTITY	UOM	TOTAL DIRECT	FOOH	HOOH	PROF	Misc Ta	BOND	TOTAL COST	UNIT COST
AA SNAKE RIVER DMMP										
AA.12 NAVIGATION PORTS AND HARBORS										
AA.12.02 JOSO DISPOSAL & 1st YR. DREDGING										
AA.12.02.02 1st YEAR DREDGING COST										
AA.12.02.02. 1 DREDGING COST	7000.00	CY	115,500	0	0	0	0	0	115,500	16.50
TOTAL 1st YEAR DREDGING COST	1.00	CY	115,500	0	0	0	0	0	115,500	115500.00

	QUANTITY UOM	MHRS	LAB	EQUIP	MAT	OTHER	TOTAL COST	UNIT COST
AA SNAKE RIVER DMMP								
AA.12 NAVIGATION PORTS AND HARBORS								
AA.12.02 JOSO DISPOSAL & 1st YR. DREDGING								
AA.12.02.02 1st YEAR DREDGING COST								
AA.12.02.02. 1 DREDGING COST	7000.00 CY	0	0	0	0	115,500	115,500	16.50
TOTAL 1st YEAR DREDGING COST	1.00 CY	0	0	0	0	115,500	115,500	115500.00